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ABSTRACT

This paper provides a synthesis of the literature on school-based intervention assistance teams and their direct or indirect impact on special education programs and practices. A total of 67 articles, documents, reports, and/or books was reviewed. A background section considers the history of these teams, their composition, and the prereferral intervention model used by them. The review is then organized into findings concerning five specific impacts or outcomes: (1) changes in referrals to special education; (2) appropriateness of special education referrals; (3) team, administrator, and teacher satisfaction; (4) administrator, team, and teacher attitudes, tolerance, and skills for working with students experiencing academic and behavioral difficulties; and (5) changes in student behavioral and academic performance. Among conclusions and recommendations are the following: the term "prereferral intervention" has resulted in many misconceptions; school-based intervention assistance teams should be focused on prevention and early assistance to classroom teachers; use of such teams can result in loss of state and federal funding when funding is based on child count data for children receiving special education; these teams run the risk of becoming another layer of bureaucracy; and evaluation procedures documenting the impact of the teams are essential. Appended are summaries of 32 major studies. (Contains 67 references.) (DB)

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SCHOOL-BASED INTERVENTION ASSISTANCE TEAMS AND THEIR IMPACT ON SPECIAL EDUCATION

by Judy A. Schrag and Kelly Henderson

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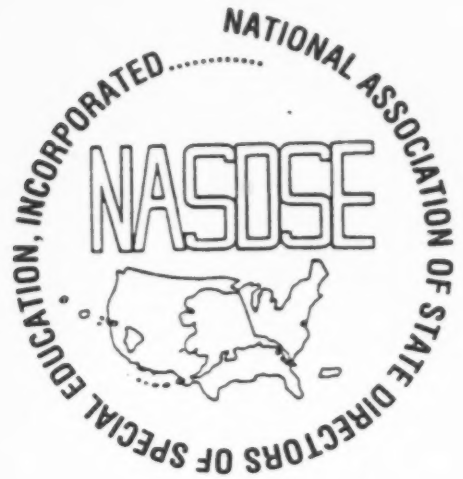

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SCHOOL-BASED INTERVENTION ASSISTANCE TEAMS AND THEIR IMPACT ON SPECIAL EDUCATION

INTRODUCTION

Schools are social systems and, as such, represent organizations that have an orderly combination of parts that interact to produce a desired outcome or product (Curtis and Stollar, 1995). Social systems, including schools, differ in their capacity to analyze and solve problems related to their goals or outcomes. As part of the social system, prereferral intervention strategies/procedures have increasingly been implemented in the schools across the country with multiple goals. Prereferral strategies, including problem solving teams, are being implemented to provide immediate assistance to classroom teachers in the modification of instruction or classroom management to better accommodate students who have specific behavioral and/or academic learning problems as an alternative to referring the child for assessment for special education eligibility. Following are the desired goals or outcomes of prereferral intervention strategies/procedures: to preclude inappropriate referral to and identification of students for special education whose needs can be met in general education programs, to identify teaching strategies that are effective in the classroom, and to enhance the knowledge and skills of classroom teachers with respect to teaching increasingly-diverse groups of students.

School-based problem solving or intervention teams have been referred to by an assortment of names in various schools and school districts throughout the nation; e.g., teacher assistance teams, prereferral intervention teams, prereferral consultation teams, student assistance teams, student success committees, and instructional support teams. Throughout this document, the term school-based intervention assistance (SIAT) team will be used to refer to this model for addressing student behavior and/or learning problems.

School-based intervention teams are composed primarily of general education teachers, but they may include special education teachers and other multi-disciplinary personnel such as school psychologists, guidance counselors, social workers or other support specialists. School principals may also be members of school-based intervention assistance teams. School-based intervention assistance teams draw on the resources created by the group process as well as the skills of individual team members.

School-based intervention assistance teams carry out four major activities. These are as follows:

1. After identifying a student with behavior or learning problems who is at risk for special education referral, the teacher seeks assistance from the school-based intervention assistance team.
2. The team analyzes the problem with attention to contextual as well as child factors and

identifies specific interventions.

3. The teacher implements the identified interventions.
4. The effectiveness of the plan is determined. If the intervention is determined to be successful, the process is ended. If not successful, a second intervention is designed by the teacher/team, or a recommendation is made for referral to special education or to another support program.

PURPOSE AND METHODOLOGY

Evaluation of school-based intervention assistance teams has focused on their impact on referral rates to special education; appropriateness of special education referrals; administrator, teacher, and team satisfaction related to assistance provided; and changes in student behavioral or academic performance. The purpose of this paper is to provide a synthesis of the literature regarding the impact of school-based intervention assistance teams directly or indirectly on special education programs and practices.

Procedure

The literature examined within this study was identified through computer searches of ERIC and other on-line sources, Dissertation Abstracts, as well as a review of specific articles and existing literature summaries and syntheses on school-based intervention assistance teams. The original articles of references identified through the above sources were reviewed. While a portion of the references listed in this search provide a discussion of the role and function of building-based intervention assistance teams, the focus of this review and synthesis is on research findings and information regarding the impact of school-based intervention assistance teams on special education. A total of 67 articles, documents, reports, and/or books that related to evaluation of team outcomes were reviewed.

Documents were examined for author(s), year of publication, research focus, methodology, dependent and independent variables (if applicable), and results. Appendix A provides a written summary for each relevant source, including the study source, purpose of the study, description of team, type of evaluation, evaluation measures, results, and recommendations. Categorization of impact data and information is found in Table 1 with accompanying narrative information throughout the body of this report. No attempt was made to analyze the methodology of specific research studies; however, it must be noted that only a few studies utilized research designs with control groups. Surveys, interviews, and observations were often used within quasi-experimental designs. A number of the studies reviewed did not have adequate comparison cohorts to reach definite conclusions regarding the impact of school-based intervention teams upon student behavior and academic performance.

BACKGROUND

History

During the 1970s and 1980s, the use of school-based intervention assistance teams increased in states and school districts across the country. Carter and Sugai (1989) found that 23 SEAs required some type of prereferral intervention. In addition, 11 SEAs recommended the implementation of school-level intervention assistance teams. Although a more recent survey or a study of the actual implementation of school-level intervention assistance teams could not be identified, it is thought that they are used, to some extent, in virtually every state across the country.

School-based prereferral interventions represent a trend toward increasing the use of more indirect special education services and the integration and collaboration of general and special education (Graden, 1989; Graden, Casey, & Christenson, 1985). In recognition of increasingly-diverse student learning needs, prereferral interventions are being implemented to provide additional overall assistance to general education classroom teachers.

The concept of school-based intervention assistance teams as a prereferral intervention first emerged in the literature in the late 1970s and early 1980s (e.g., Chalfant, Pysh, & Moultrie, 1979; Graden, Casey, & Christenson, 1985). The foundation of prereferral intervention and school-based intervention assistance teams came from the consultation literature (e.g., Bergan, 1977; Meyers, Parsons, & Martin, 1979). Graden (1989) has argued that collaboration consultation provides the foundation for how problem solving occurs across both an individual consultation approach (consulting teacher) and a team approach (school-based intervention assistance teams).

The term Teacher Assistance Team (TAT), introduced by Chalfant, Pysh, and Moultrie (1979), is a school-based, problem-solving team through which teachers get help from other teachers as well as provide help to other teachers for children who are difficult to teach or manage. There are a number of TAT variations in the literature and in practice across the country. Graden et al. (1985) introduced Mainstream Assistance Teams which provide behavioral consultation to classroom teachers.

School-based intervention assistance teams were initiated for several reasons. First, an unintended outcome of the implementation of P.L. 94-142 in the 1970s was a "refer-test-place" sequence to providing services for students who have academic or behavioral problems. This resulted in over-referrals to special education, particularly as the number of students with complex needs increased making them at-risk for school failure. Costly and time consuming testing procedures have become a concern. The "mindset" that service was only available to student through referral to and placement in special education resulted in the perception that general educators are not trained and equipped to deal with students who have learning and/or behavior problems. School-based intervention assistance teams propose consultation as a strategy to enhance the skills and abilities of general classroom teachers and other school staff to effectively deal with students with learning and behavior problems (Graden, 1988).

A major criticism of traditional testing practices is that when students are tested for special education, the testing results are often not instructionally relevant and generally not helpful to teachers (Thurlow & Ysseldyke, 1982). In addition, when students are declared ineligible for special education, classroom teachers are often left without any useful suggestions or help. Finally, mainstreaming and inclusion trends have expanded the teacher's role and responsibilities to address a broader diversity of students without smaller teacher-student ratios and adequate resources. Problem solving team or school-based intervention assistance team approaches can help empower the teacher to find solutions to student learning problems in the classroom.

Composition of School-Based Intervention Assistance Teams

The composition of school-based intervention assistance teams providing prereferral assistance varies from school to school even within school districts. One model uses solely general education classroom teachers as team members, with specialists asked to participate when necessary. At a minimum, school-based intervention assistance teams involve the referring teacher (Yau, 1988). The school principal may or may not be a regular member of school-level intervention teams. Team structure is often decided on the basis of the presenting problem. For example, some school-based intervention assistance teams focus on developing interventions for individuals or small groups of students in areas such as decreasing the frequency of a target behavior. This focus may warrant the involvement of behavioral specialists as a part of the team. Other interventions may be focused on restructuring the instructional process or the instructional setting such as establishing a classroom management system. This type of intervention may also warrant the involvement of a school psychologist or another specialist. Other teams may focus on curriculum adaptation and necessitate the involvement of general and special education teachers.

Mental health consultation is yet another team resource which could necessitate the involvement of mental health specialists from the community on the school-based intervention assistance team. A multi-disciplinary team model may also be adopted and include an administrator; special services personnel such as a psychologist, guidance counselor, nurse, social worker, or speech and language specialist; a special education consulting teacher; and a regular education teacher.

Prereferral Intervention Model Used by School-Based Intervention Assistance Teams

The prereferral intervention model utilized by school-based intervention assistance teams is based on an indirect, consultative model of service delivery in which assistance is provided at the point of initial referral rather than following extensive testing and determination of a disability and eligibility for special education. The most common student problems addressed by intervention assistance teams are general academic performance, social/emotional adjustment, academic behavior, and reading (California State. Department, 1986).

Graden, Casey, and Christenson (1985) provided the following description of a prereferral

intervention model upon which school-based team intervention is based:

- In Stage 1, the classroom teacher requests consultation. This can be done informally by requesting problem-solving assistance from a building consultant such as a school psychologist or consulting teacher. Or, a more formal approach can be used in which referrals from the classroom teacher are screened by a building team for group problem solving.

- In Stage 2, consultation takes place to identify and define the specific problem or area of concern and to explore possible intervention.

- Stage 3 involves observation of the student and the characteristics of the classroom to assist in further intervention planning.

- Stage 4 involves a school-level intervention team conference to share information and determine the appropriate intervention(s). This group operates as a shared-problem-solving team as opposed to a formal, special education decision-making team.

- The intervention is implemented in Stage 5 and evaluated in Stage 6. If the intervention is not successful, another intervention is determined by the problem solving team or the child is referred to special education or another support program for more intensive assistance.

RESULTS - IMPACT OF SCHOOL-BASED INTERVENTION ASSISTANCE TEAMS

Studies regarding the impact of school-based intervention assistance teams have varied in relationship to the focus of their research questions, methodology, and the scope of the research. For example, some evaluation studies have reviewed the impact of school-based intervention assistance teams upon referral rates. Other studies have looked at teacher or team satisfaction with school-based intervention assistance team functions and services or the impact on student outcomes. Appendix A provides a detailed summary of 31 studies that contain some impact findings. Table 1, which follows, categorizes findings from these studies in the following areas:

1. changes in special education referrals; e.g., increase or decrease in the number of students referred for testing and special education eligibility;
2. impact on number of students appropriately referred for special education; e.g., formally referring to special education only those students for whom classroom interventions in the general education classroom prove ineffective;
3. impact on attitudes of team, teacher, and students regarding the use of school-based intervention, e.g., satisfaction level of intervention provided;
4. impact on teacher attitudes, tolerances, and skills toward diverse students; e.g., enhancing the capability for meeting student needs in his/her classroom; and
5. changes in student academic or behavioral performance; e.g., evidence of demonstrated student impact.

Data has been presented in Table 1 to allow the reader to ascertain the type of impact examined in each study. It must be noted that while an "x" may appear in the impact columns within Table 1, the particular study may not have had a controlled experimental design leading to a conclusive finding. The reader is invited to review the fuller abstract of each of these studies located in Appendix A.

Table 1: Summary of Literature Review Regarding Impact of School-Based Intervention Assistance Teams

Legend:

A = Changes in Numbers of Special Education Referrals
B = Change in Appropriateness of Special Education Referral
C = Change in Team, Administrator, Teacher, and Student Satisfaction
D = Change in Team, Administrator, and Teacher Attitudes, Tolerance, and Skills
E = Change in Student Performance (Academic and/or Behavioral)

Study Source	Description of Team	Impacts Included Within Study Findings/Discussion				
		A	B	C	D	E
Bay, M., Bryan, T. & O'Connor, R. (1994)	Teacher Collaboration Team - Model included three components: Information Sharing sessions to assist teachers in acquiring new knowledge; Peer Exchange Sessions for generating new strategies; and Peer Coaching Teams for teachers to coach each other	X		X	X	
Beck, R. (1991). Project RIDE	School-Wide Assistance Teams made up of regular classroom teachers based on the premise that teachers are often their own best resources. Three or four educators are selected or elected to serve on the SWAT for one to three years.	X	X	X	X	X
California State Department of Education (1986, June)	Student Study Teams include someone that has a concern regarding a student, requests assistance, and brings case to team at school; at least two persons that meet to discuss the student and make decisions; and one or more participants that follow decisions made at the meeting.			X		
Chalfant, J. C., & Pysh, M. V.D. (1989)	Teacher Assistance Teams consist of three regular classroom teachers with the referring teacher as the fourth and the parent as the fifth member. One person has the responsibility and authority to coordinate team activities.	X	X	X		X
Chalfant, J.C. & Pysh, M.V. , and Moultrie, R. (1979)	Teacher Assistance Teams consist of three regular classroom teachers with the referring teacher as the fourth and the parent as the fifth member. One person has the responsibility and authority to coordinate team activities.	X				
Chalfant, J. C., Pysh, M., Miros, R., Balkman, K., Bradshaw, M., & Bradshaw, E. (1991)	Teacher Assistance Team core team with additional team members	X	X	X		

Cosden, M.A., & Semmel, M.I. (1992)	Teacher Assistant Teams - Composition range from Teams comprised solely of specialists trained to engage in specific team activities to those which utilize personnel across disciplines. Principal is also a member of some teams.	X	X	X	X	X
Flugum, K. & Reschly, D. (1994)	School personnel utilizing a problem solving approach to assist classroom teachers to work with students having learning problems.			X	X	X
Fuchs, D. and Fuchs, L.S. (1989)	Mainstream Assistance Team model involving behavioral consultation. Team included a special education resource room teacher, a school psychologist or a pupil personnel specialist assisting the general/regular education teacher referring the student.			X	X	X
Fuchs, D., and Fuchs, L.S. (1991)	The Mainstream Assistance Team approach uses an ecological perspective and a collaborative problem-solving version of consultation. Behavioral support is provided by a multi-disciplinary team composed of a building-level psychologist and a special education as well as a general educator with a targeted difficult-to-teach student. Team members follow written scripts intended to contribute to proper use of three increasingly inclusive versions of behavioral consultation.			X	X	X
Fuchs, D., Fuchs, L.S,. and Bahr, M. (1990)	The Mainstream Assistance Team implementing the BC model included a general education teacher, who identified at least one difficult-to teach pupil at risk for special education referral engaged in systematic BC with a school-based consultant (a special education resource room teacher, a school psychologist or a pupil personnel specialist. The model is designed to strengthen general educators' instruction and management so as to decrease problematic student behavior in the general education classroom. Consultants were provided 14 hours training in BC. BC incorporates four stages: problem identification, problem analysis, plan implementation & problem evaluation.		X	X	X	X
Fuchs, D., Fuchs, L., Gilman, S., Reeder, P. Bahr, M. Fernstrom, P., & Roberts, H. (1990)	See Above		X		X	X
Graden, J. (1988)	Prereferral intervention teams within four states (California, New York, Kansas, and North Carolina) varied and included such titles as Teacher Assistance Teams, student Success Committees, School Site Solution Committee, and Problem Solving Groups.	X	X	X	X	X
Graden, J and Casey, A. (1983)	Consulting teachers and other special service staff provided consultation and intervention for classroom teachers.	X		X	X	
Graden, J., Casey, A., and Bonstrom, O. (1985)	Consulting teachers and other special service staff provided consultation and intervention for classroom teachers.	X				
Harrington, R.G. & Gibson, E. (1986)	Pre-assessment team was not described			X		
Hayek, R. A. (1987)	Within literature review, membership of Teacher Assistance Team varies, depending upon team function but usually includes referring teacher, other teachers recognized for instructional expertise and an administrator who acts as instructional leader. Support and special education personnel and parents may participate.	X		X		X

Kovaleski, J.F., Tucker, J.A., and Duffy, D. J., Jr. (1995)	Instructional Support Teams in Pennsylvania are mandated by state law. The membership varies, but always includes building principal, student's classroom teacher, and support teacher.	X				X
Kruger, L.J., Struzzziero, Watts, R., and Vacca, D. (1995)	Study looked at the relationship between organizational support and satisfaction with Teacher Assistance Teams.			X		
McKay, B. & Sullivan, J. (1990)	Paper described the collaborative technique used by Teacher Assistance Teams (school-based general and special educators), to serve mainstreamed students and other unidentified "at risk" students in the regular classroom in a timely and efficient manner.	X	X		X	
Nelson, J.R., Smith, D.J., Taylor, L., Dodd, J.M., Reavis, K. (1991)	Review of the literature examined prereferral intervention approaches including Teacher Assistance Teams, School Consultation Committees, prereferral intervention model, Teacher Resource Teams, and Mainstream Assistance Teams.	X	X		X	X
Nelson, J.R., Smith, D., Taylor, L., Dodd, J., and Reavis, K.(1992)	Prereferral intervention teams reviewed included Teacher Assistance Teams (including the referring teacher and elected faculty); School Consultation Committees (including regular and special education teachers); Teacher Resource Teams (outside consultant trains regular classroom teachers; prereferral intervention model involving a consultant providing assistance to classroom teachers; Mainstream assistance teams (consultants alone, or in conjunction with the multi-disciplinary team assisting teaching to identify and analyze problems; and Peer Problem Solving Groups in which a peer assists the referring teacher.	X		X	X	
Ohio State Department of Education (1988, August)	Report describes seven models of Intervention Assistance Teams.	X	X		X	
Pugach, M.C., & Johnson, L.J. (1989)	Article discusses advantages and disadvantages of informal problem-solving teams and other consultation models involving the special education teacher or school psychologist providing individual assistance to the classroom teacher.		X		X	
Rosenfield, S. (1992	Effectiveness of the Instructional Consultation Team model is discussed.	X	X			X
Ross, R. P. (1995)	Paper reviews literature on three models of intervention assistance: the behavioral model of consultation focusing on individual or small groups of students, the process model focusing on organizational analysis and interaction among people in work groups; and the mental health model focusing on what is blocking the teacher's problem-solving skills.		X	X	X	X
Schrag, J. (1995)	School-based support teams are being implemented throughout Delaware with different names and varying compositions. Usually, the teams are made up of classroom teachers, administrators, and other special education support personnel. School principals may also participate as a prereferral team member.	X		X	X	X

Schram, L. & Semmel, M. I. (1984)	Problem Solving Teams are a school-based group that provides consultation and follow-up assistance to insure proper placement of students in school site programs and to help decrease the number of inappropriate referrals to special education.	X	X	X	X	
Sindelar, P.T., Griffin, C.C., Smith, S.W. & Watanabe, A.K. (1992).	This study reviewed the literature regarding a variety of teams including Teacher Assistance Teams, and more formal consultative, multi-disciplinary models.	X	X	X	X	
Singer, A. (1993, July).	Paper describes Pupil Assistance Committees which usually include the principal, learning consultant, reading specialist, an experienced general education teacher, and the referring teacher.	X	X	X	X	
Yau, M. (1988, December)	Reviews various problem solving team models including Teacher Assistance Teams that include regular classroom teachers with special education teachers playing a support role.	X	X	X	X	X

The following is a discussion of research findings related to the five areas of impact.

1. Changes in Referrals to Special Education

A number of researchers have found that intervention assistance provided by school-based intervention assistance teams can reduce the number of students referred for formal assessment for eligibility and placement into special education. Reduction of students referred occurs provided that there is appropriate administrative support, sufficient time and resources, staff willingness, and implementation of well-designed interventions (e.g., Fuchs, Fuchs, & Bahr, 1990; Fuchs, Fuchs, Bahr, Fernstrom, & Stecker, 1990; Fuchs, Fuchs, Gillman, Reeder, Bahr, Fernstrom, & Robert, 1990; Gosden & Semmel, 1992; Graden, Casey, & Bonstrom, 1985; Kovaleski, Tucker, & Duffy, 1995; Hayek, 1987; Koveleski, Tucker, and Davis, 1985; McKay & Sullivan, 1990; Schrag, 1995; Schram & Semmel, 1984; Sindelar, Griffin, Smith, & Watanabe, 1991; and Yau, 1988).

For example, evaluation data in four of the six schools using a team model within a Prereferral Intervention Delivery system indicated that the high demand for consultation was related to a concomitant decline in testing and placement (Graden, Casey & Bonstron, 1985). Although the sample was small, Bay & O'Conner (1994) reported that 11 of 16 children at risk for school failure did not require/need for special education services following teacher collaboration team intervention (peer coaching). Comparing the year prior to implementation of the school level intervention team to its initial year of use, Singer (1993) found a reduction of special education student referrals from 64 to 4. McKay and Sullivan (1990) found a 38-78 percent decrease in referral to special education across eight schools receiving prereferral team

assistance.

Graden (1988) reported reductions in prereferrals for special education in studies conducted or supported by the California, Kansas, New York, and North Carolina State Education Agencies. Specifically, the North Carolina study found a 42 percent decrease in students tested for special education eligibility. The Kansas study found that in teams considered "successful", only 50 percent of students served were subsequently tested for special education eligibility, compared to 80 percent of students referred for testing and special education placement by "noneffective" teams. Rosenfield (1992) reported that 73 percent of special education referrals were placed in special education during the first year of implementation of Instructional Consultative Teams. In the fourth year of Team implementation, only 6 percent of the special education referrals were subsequently placed.

The effectiveness of the Teacher Assistance Teams (TAT) model designed by Chalfant, Pysh and Moultrie (1979) was evaluated over several years. One of the earliest studies of Teacher Assistance teams was conducted in 1979 (Chalfant et al.) following implementation in seven schools in a suburban area of Illinois. Of the 320 children referred to the teams, TATs were able to resolve 203 referrals (63.5 percent) successfully without referring the child to special education. The authors, however, did not provide a comparative standard to fully evaluate the effect of the TAT approach.

Ten years later (1980), Chalfant and Pysh reported on data from 42 within-building problem solving teams that assisted teachers with 386 students. These TATs were in seven states (Arizona, Alaska, Illinois, Nebraska, Maryland, Kentucky & Maine). The majority of problems these children presented were resolved in general education, while 21 percent of these students were referred to special education.

McGlothlin (1981) studied the effect of a School Consultation Committee (SCC) and reported a 50 percent reduction in student referrals for formal assessment. A comparative standard (e.g., without the use of a SCC) was not, however, provided.

Beck (1993) found a 56 percent reduction in students referred to special education during 1982-1989 (post implementation of Project RIDE) in Great Falls, Montana. Project RIDE involves the use of School Wide Assistance Teams (SWATS) to support classroom teachers who have students with learning and behavior problems. Using the same model, in Ysleta Intermediate School District, El Paso, Texas, there was a 45 percent decrease in special education referrals from 1990-91 to 1991-92. In Baltimore Public Schools, Baltimore, Maryland, there was a 33 percent decrease in referral from 1991-92 to 1992-1993.

Graden and Casey (1983) indicated that in two of the three schools in which intervention teams assistance was provided, there was little change in the numbers of students referred for testing, and placed in special education. Graden, Casey, and Christenson (1985) implemented a prereferral intervention model across six schools. They reported that formal assessment and special education placement rates declined in four of the six schools. However, in the remaining two schools, there was an upward trend in the number of students formally assessed and then

placed into special education.

Maher (1991) implemented Teacher Resource Teams at two schools that worked with a total of 235 cases. The Teams were able to help the teachers successfully deal with about 75 percent of these cases. Referrals to special education were decreased from 15.0 percent to 6.8 percent and from 13.8 percent to 5.8 percent at the two schools from the previous year. Maher found that this reduction was statistically significant.

2. Appropriateness of Special Education Referrals

Once school-based intervention assistance teams are operating within a particular school building, a decrease in the number of inappropriate referrals for special education services often results. One of the strengths of the intervention team model is the development of interventions for students who may otherwise be referred for special education, but who indeed do not qualify for such services. The intervention assistance team may suggest interventions and support the referring teacher to the extent necessary to address the student's problems, thus precluding the need for a formal referral for special education services.

In her study of Instruction Consultation Teams, Rosenfield (1992) found that as schools adopted and utilized the teams in subsequent years, the number of team referrals for consultation services increased significantly, while those requesting assessment for special education decreased. Further, the majority of those students who were considered to be in need of special education referral and assessment were found to be eligible for special education services indicating more appropriate referrals. In 1989, Chalfant and Pysh summarized five program development studies which incorporated findings on 96 TATs in seven states (Arizona, Alaska, Illinois, Nebraska, Maryland, Kentucky & Maine). A 63.9 percent drop in the number of inappropriate referrals from the previous year was noted; e.g., students did not have a disability. Beck (1992) reported more appropriate referrals to special education. Eighty percent of the cases referred to School Wide Assistance Teams in Granite School District during 1988-1989 were successfully resolved with more appropriate students being referred to special education. As a result of implementing Project RIDE, including School Wide Assistance Teams (Beck, 1993), referrals to special education were found to be more appropriate; e.g., pre-Ride implementation, 54 percent of students referred to special education were found to be ineligible; post-RIDE, 20 percent were found to be ineligible. Other researchers have also reported an increase in more appropriate referrals to special education as a result of the implementation of school-based intervention teams (Cosden & Semmel, 1992).

Another study of the use of Student Assistance Teams in eight schools revealed that not only did the number of referrals for special education evaluation decrease, but the number of "No Exceptionality" (did not have a disability) classifications also decreased. McKay and Sullivan (1990) compared the average of inappropriate "No Exceptionality" referrals to special education in the three years prior to initiation of the Student Assistance Teams to those made in the first year of the school-based intervention assistance team. There was an average of 79 percent decrease in the number of inappropriate special education referrals across the eight schools

involved in the study.

Larger evaluations and reviews of school-based intervention teams reinforce the importance of such teams in maintaining or improving the appropriateness of special education referrals (Ohio State Department of Education, 1988; Sindelar, Griffin, Smith, & Watanabe, 1992). The Ohio State Department of Education (1988) found that special education referrals were more appropriate following prereferral team intervention because teachers had a better understanding of the students as well as a wider variety of instructional strategies. Schram and Semmel (1984) reported that fewer and more appropriate students were referred to special education when Problem Solving Teams had the following: principal support, clear procedures for conducting team business, practical and useful recommendations for teachers, and team interest in teacher satisfaction.

3. Team, Administrator, and Teacher Satisfaction

Use of school-based intervention assistance teams can yield high team, teacher, and student satisfaction. Graden and Casey (1983) reported teachers expressed satisfaction regarding prereferral intervention assistance received from consulting teachers and classroom teachers working together. Kruger, Struzziero, and Vacca (1995) found a mean of 4.45 on a 6-point Likert Scale indicating that teachers were quite satisfied with the TAT assistance provided.

Hayek (1986) investigated teacher perceptions of teacher assistance teams and found that a majority of teachers believe that these teams meet the needs of problem learners. Teachers also indicated that they would refer more students to special education if Teacher Assistance Teams were not available to them. Teachers, however, indicated that they were frustrated by the time and paperwork required to use the Teacher Assistance Team.

A survey of teachers experienced in pre-assessment intervention teams revealed that the majority of teachers were satisfied with the team itself and felt that the team understood the referral problem and was sensitive to their feelings (Harrington & Gibson, 1986). It is interesting to note, however, that those same respondents also indicated with only marginal agreement that the initial intervention recommendations made by the team were successful.

Following peer coaching/exchange teams/sessions, Bay, Bryan, and O'Connor (1994) reported that teachers expressed satisfaction with prereferral models that assist them in working with children at risk for referral. Teachers perceived the Information Session to be places where they could enhance their knowledge about working with children with learning problems. Information Sessions were formal opportunities to present information and for teacher sharing.

In a study by Maher (1991) in which Teacher Resource Teams were implemented in two high schools, evaluation results indicated that teachers were satisfied with the prereferral intervention support services they received.

In their review (1989), Chalfant and Pysh reported that teachers identified the following

variables related to Teacher Assistance Team success: (1) strong administrative support from building principals; (2) willingness of service providers to participate in the TAT consultative process; (3) team training; (4) team efficiency; (5) networking with other teams; and (6) the use of formative and summative evaluation procedures. Concerns included insufficient time for team meetings and interactions, failure to generate useful intervention strategies, interference with the special education referral process, lack of faculty readiness to initiate the team, and little or no impact on student progress. Ninety-one percent cited support from the building principal as a key factor in attaining success. Faculty support and participation was also found to be important for team effectiveness by 11 of the 23 teams. Fourteen of the 23 teams viewed limited teacher support as a concern. Of the 218 teachers surveyed in 64 schools, 84 percent responded. Of these respondents, 88 percent were positive and 12 percent were negative regarding TAT effectiveness. Cosden and Semmel (1992) found that TAT members are concerned about having adequate resources to implement their recommended interventions.

The California State Department of Education has sponsored two studies on the use and effectiveness of TATs in the state (California State Department of Education, 1986; Gerber and Miske, 1984;). These studies report a lack of extant data to support administrator and teacher perceptions of Teacher Assistance Team effectiveness. Team success was inferred through informal networks of communications indicating that teachers were satisfied with team efforts. Teachers did report a lack of resources available to help them implement team recommendations. Teachers also noted the importance of individuals accepting responsibility for completion of tasks outside team meetings.

In evaluating the effectiveness of Mainstream Assistance Teams (MAT), Fuchs and Fuchs (1989) found that while no significant change in student behavior was observed, consultants and teachers reported positive effects for the more inclusive MAT model utilized.

Graden (1988) reported that teachers in the Kansas SEA Study indicated that opportunities for sharing of intervention ideas and support for team discussions were strengths of team assistance provided. Teachers, however, indicated that the process of referring and receiving assistance took too long and there was too much paperwork.

McCall (1990) studied the association among number, type, extent of use, preference of use, and effectiveness of prereferral intervention and the classification rates (or numbers of students being referred for special education of a low of 1-5 percent and a high of 9-15 percent of the total school enrollment) of referring school districts. While the number, type and use of prereferral assistance did not differ between low and high referral rate school districts, teachers in low classification rate school districts viewed classroom-, school-, and district-based prereferral interventions as likely to be successful.

Harrington and Gibson (1986) utilized a questionnaire survey to determine teacher satisfaction with assistance provided by pre-assessment teams. Thirty-four percent of the teachers indicated that the initial recommendations made by the teams were not successful in helping to correct student problems. However, the majority of teachers expressed overall satisfaction with help received.

Teachers are not alone in their reported satisfaction with school-level intervention teams. In a survey of special education administrators, Nelson, Smith, Taylor, Dodd and Reavis (1992) found that most administrators surveyed believe that prereferral interventions maintain students in regular education classroom, thus resulting in fewer referrals for special education services.

4. Administrator, Team and Teacher Attitudes, Tolerance, and Skills for Working with Students Experiencing Academic and Behavioral Difficulties

An important goal of assistance provided by school-based intervention assistance teams is to improve attitudes, increase tolerance, and enhance skills of classroom teachers and other school personnel so that the learning/academic and behavior needs of referred students and others in the classroom can be met. Fuchs and Fuchs (1990) and Fuchs et al. (1990a and 1990b) reported that the Mainstream Assistance Team approach resulted in teachers viewing problems as less severe. However, teacher tolerance for diverse learning behaviors and more positive attitudes toward students with learning and behavior problems were not impacted. Teachers concluded that the consultation process requires greater directiveness.

Pugach and Johnson (1990) implemented a school-based, problem solving team model that assisted teachers to acquire reflective dispositions about their practice through peer collaboration. They found that teachers learn how to assist each other in rethinking classroom problems, generating solutions, and evaluating the impact of these solutions. In the second year of their project, 48 teachers participated in the peer collaboration process. An additional 43 teachers served as a comparison group. Data indicated that teachers who engaged in peer collaboration were more tolerant of the cognitive functioning of children, solved 86 percent of the problems addressed, and changed 91 percent of their descriptions of problems, thereby shifting from a student-centered problem orientation to a teacher-centered one (Johnson & Pugach, 1991). Using a 5-point Likert scale, they also found that teams indicated that their network meetings allowed time to share ideas, obtain additional intervention strategies, develop support systems, and exchange classroom strategies. Cosden and Semmel (1992) also reported general changes in teacher attitudes, tolerance, and skills as a result of TAT implementation.

Another finding involves the change in teacher attitudes, tolerance, and skills over time as the school-level intervention teams are accepted into the culture of a particular school. Kovalski, Tucker, and Duffy (1995) noted, in their examination of the implementation of Instructional Support Teams across one state, that the longer a school has been involved in the program, the more frequently teachers use the process. When school-level intervention teams operate in a building, the teachers become increasingly more comfortable and competent to address student problems on their own and/or with the assistance of the team (Graden & Casey, 1993; McKay & Sullivan, 1990; Singer, 1993). Chalfant & Pysh (1989) suggested that as a school-level intervention team program matures, teachers shift from seeking assistance for behavior management problems to seeking assistance for academic skill problems.

Only 5 percent of the 41 general education teachers surveyed by Harrington and Gibson (1986) thought pre-assessment teams provided them with new intervention ideas for students

having learning and/or behavioral problems. A majority of the teachers felt that the teams failed to explore a sufficient variety of intervention options and those they provided were unsuccessful. Forty-two percent of the teachers indicated they had failed to implement the recommended interventions. Although only 56 percent responded to the question, 74 percent of the responding teachers indicated that they would like to have continued assistance by intervention teams.

Teachers in Great Falls Public Schools, Montana; Jordan and Granite School Districts, Salt Lake City, Utah; and Ysleta School District, El Paso, Texas were found to have increased skills to resolve classroom problems without requesting outside assistance as a result of implementation of Project RIDE including SWATs (Beck, 1993).

Graden and Casey (1983) reported no changes over the course of the year in teachers' beliefs, expectations, and preferences about students with special needs. Principals in three participating schools all reported favorable perceptions regarding the impact of prereferral intervention in increasing teacher tolerance and competencies for working with problem students. Principals reported that Problem Solving Teams helped school staff to efficiently problem solve and reach decisions about appropriate interventions for student problems (Schram & Semmel, 1984). Principals, however, felt that limited resources severely restricted the type and extent of assistance that can be provided by Problem Solving Teams.

McKay and Sullivan (1990) reported that teachers began to address student problems independently after working with the Student Assistance Team regarding specific students. They also extended their assistance to a broader range of students with learning and/or behavior problems. Nelson, Smith, Taylor, Dodd, and Reavis (1981) found that school-based team assistance (using a variety of models) increases the abilities of teachers to work with students having difficulties in the classroom. Their attitudes toward these children also improved. These same researchers found that administrators thought that the prereferral team process created bureaucratic hurdles.

5. Changes in Student Behavioral and Academic Performance

One of the most critical goals of school-based intervention assistance teams is the improvement of student achievement. Ross (1995) has reported that outcome studies generally show assistance provided by school-level intervention teams can produce desired student performance. In one study of high and low service level teams, school-level intervention teams were found to be effective in helping most of the students referred, with an average success rate of 62 percent (Gilmer, 1985). Rosenfield's study (1992) of the Instructional Consultation Team revealed some initial evidence that student achievement and behavior are positively affected by use of the service delivery model. Another recent study of Pennsylvania's instructional support teams indicate that student grade retention decreases with team implementation (Kovaleski et al., 1995).

Flagum and Reschly (1984) reported higher success for interventions that included quality indices (related to whether the behavior improved, the degree of improvement, and whether the

intervention goals were met). However, they found a low level of interventions that included use of these quality indices.

Chalfant and Pysh (1989) reported in five descriptive studies on 96 teams, that 112 students or 49 percent were rated as having great or considerable progress; 35 percent, moderate; and 21 percent, little or no progress. In their 1991 study, Chalfant et al. reported that of the 88 cases for whom outcome data was available, 30 percent of student behavior and learning problems were successfully resolved; 40 percent were partially resolved; 14 percent were partially resolved and referred to special education; 10 percent were partially resolved and referred to another resource; 5 percent were referred directly to special education; and 1 percent were referred directly to another resource.

In many cases, prereferral interventions provided by school-level teams have tended to focus more on management and maintenance of student behaviors such as work habits and interpersonal skills, than on academic performance (Martens, Peterson, Witt & Cirone, 1986; Witt, 1986). Beck (1993) reported case studies of a number of students to demonstrate significant growth in social and academic behavior of elementary students as a result of implementation of SWAT Teams (Project RIDE).

In a series of studies, Fuchs and Fuchs (1989, 1989, 1990) studied a Mainstream Assistance Team (MAT) approach based on a four-stage behavioral consultation model. Behavioral observations and rating scales administered to teachers indicated the intervention reduced problem behavior occurrences of students in the experimental group versus the control group. Fuchs and Fuchs (1989) reported that students receiving services in the Behavior Consultation Model showed stronger decreases in problem behavior than those in the control group. However, it should be noted that observations did not support problem behavior decreases reported by teacher consultants. Specifically, Fuchs and Fuchs (1991) reported that classroom observations did not depict a pre-implementation to post-implementation decrease in targeted troublesome behaviors. Instead, student problem behaviors increased by nine percent. They also found that interventions used in the classroom were poorly conceptualized and/or carried out. The short and long versions of behavioral assistance as well as more and less inclusive versions of behavioral intervention were equally effective. Fuchs, Fuchs et al. (1990) reported dramatic reductions in student behavior problems as a result of assistance provided by Mainstream Assistance Teams.

In their review of 16 research studies of the efficacy of intervention teams, Nelson et al. (1991) report that the cumulative findings indicate that more often than not, the strategies implemented under the prereferral intervention process produce the desired student performance. However, the authors warn that of the 16 studies, only two provided the experimental control necessary to make strong causal claims.

There exists some concern regarding the collection of data regarding the impact of intervention teams on student achievement and performance. For example, improved student performance is often reported by the same person implementing the intervention strategy in the absence of data-based measures. A study by Gerber and Miske (1984) in 20 schools in

California indicated that use of Teacher Assistance Teams had increased the appropriateness of their referrals to special education; however, none of the schools in this study were able to provide data to demonstrate that the interventions recommended by the teams had resulted in positive and documented educational outcomes for students. Schrag (1995) also found a lack of existing data within Delaware school districts regarding the impact of prereferral interventions, including prereferral intervention teams, on student behavior and academic performance.

Grabner and Dobbs (1984), in a case study, examined the effect of a Teacher Assistance Team approach on the disruptive behavior of a seventh-grade student. Although no formal data was reported, the teacher indicated that the behavioral contract implemented as a result of Team recommendations was effective. Consumer satisfaction, however, may be an insufficient basis on which to evaluate the change in student performance. Sindelar, Griffin, Smith and Watanabe (1992) also reported general student performance increases, although normative data was not provided.

Graden (1988) reported an overall concern about the lack of normative or other data documenting student academic or behavioral impact as a result of prereferral intervention received. Two related studies (Carter & Sugai, 1989; Harrington & Gibson, 1986) surveyed prereferral interventions being implemented within the states. Carter and Sugai reported that a majority of states required or recommended prereferral intervention procedures. However, a majority of SEA officials surveyed by Carter and Sugai (1989) indicated that systematic evaluation studies are not being carried out regarding the impact of prereferral interventions. For example, in the Kansas study, Graden reported that there was a lack of impact data within 84 percent of the student files in the program for students with learning disabilities and 76 percent of the students in the program for students with behavioral disabilities. The types of interventions implemented were changing seats and contacting parents. These indirect interventions rather than more direct interventions to increase student skills are typically viewed as weak interventions.

Schram and Semmel (1984) found that none of the sites studied had objective, formative data regarding post educational outcomes for students. Instead, schools rely on loose, informal networks to share evaluation information between team members and teachers.

SUMMARY AND RECOMMENDATIONS

This report presents a synthesis of the literature regarding the direct and indirect impact of school-based intervention assistance teams on special education. Five specific impacts or outcomes were considered: changes in referral rates to special education; appropriateness of special education referrals; administrator, teacher, and team satisfaction related to assistance provided; changes in attitudes, tolerance, and skills of the team, administrators, and teachers; and changes in student behavioral or academic performance.

Findings related to the five specific impacts or outcomes as indicated within this report provide several tentative conclusions. As noted earlier, many of the studies reviewed utilized quasi-experimental designs without proper controls for conclusive findings. The findings,

however, seem to suggest that prereferral intervention strategies and approaches can have positive impact on special education delivery practices. School-based intervention assistance teams can increase the abilities of teachers to educate students who have learning and/or behavioral problems rather to refer these students to special education. As a result, fewer and more appropriate referrals are made to special education and other support programs. The attitudes and tolerance of teachers toward students with diverse learning needs can also be enhanced although there is not strong data to support these changes. In addition, the use of school-based intervention teams appear to produce desired student performance; e.g., improved behavior or increased academic performance. It was noted, however, that adequate documentation regarding student change is often missing. As several teachers expressed to one of the writers of this paper (Schrag, 1995), "if suggestions made by prereferral intervention teams are successful with the students, we don't take the time to conduct a post test or to document the change, we just keep on teaching and interact informally with our teaching peers and with parents about student improvements made."

One of the common findings across various studies is that a core requirement of a successful problem solving intervention team is effective training and support for team members, including the classroom teacher with the initial student concern. Idol and West (1987) have indicated that school-level intervention teams (regardless of the name) have a common requirement for knowledge of and skills in assessment focused on curriculum-based assessment and diagnostic/analytic teaching. Rosenfield (1992) has added that skills for monitoring of student progress are needed using data-based measures. Zins, Curtis, Graden, and Ponti (1988) also stressed the important requirement of knowledge of systems theory and change techniques for those who provide consultation. Schram and Semmel (1984) provide details regarding results of a training package field test and include guidelines for training, in addition to a self-training guide for school site staff. While utilization of staff training varies by state, district and school (Hayek, 1987), training in consultation and teaming strategies, particularly for special education personnel, is critical to the development of effective teams (Yau, 1988).

Since one of the goals of prereferral teams is to empower teachers and to enhance their ability to meet student needs, consultation should be an informal, cooperative venture between co-equals who blend their different skills (Evans, 1990). Effective team consultation depends on mutual trust, the team respect for the teacher's skill and the collective team ability to engage in effective problem solving. Even in models which rely to a greater extent on direct consultation, the importance of the collaborative consultation in a non-hierarchical, egalitarian relationship is paramount (Maher & Zins, 1988).

Within the articles reviewed, authors and researchers also stressed the active involvement by the referring teacher, often the person primarily responsible for the implementation, and ultimately, the success of the intervention(s). The "buy-in" or commitment from the teacher, while often supported and assisted by other team members or other specialists and consultants, makes or breaks the efficacy of the intervention (Bay & O'Connor, 1994; Sindelar et al., 1992). Extensive research regarding teacher's perceptions of school-based interventions has contributed to a greater understanding of which interventions are more acceptable and, therefore, more likely to be utilized (Martens, Peterson, Witt, & Cirone, 1986; Martens, Witt, Elliott, & Darveaux,

1985; Witt, 1986).

In addition to training, and informal, cooperative problem solving, effective school-level intervention team support is dependent on sufficient time to become consultants and collaborators. Team schedules must permit them to be available to the referring teacher and to confer together as a total group, including the referring teacher. Guidelines for use of the team, as well as for team procedures, including maintenance of clear, consistent meeting formats, need to be well-established (Hayek, 1986; Yau, 1988). In addition to development of such guidelines, provision of release time and clerical support contribute to the efficiency of conducting the team's business (Hayek, 1986; Cosden & Semmel, 1992).

Effective school-level intervention is dependent upon sustained top-down advocacy and support from school administrators, particularly from the building principal (e.g. Curtis, Zins, & Graden, 1987; Kruger et al., 1995). While research findings regarding principal participation as a team member are inconclusive, continuing administrative support of the school-adopted team model is necessary. Effective implementation of prereferral intervention from a school-level intervention team takes time. For example, there may be resistance to be overcome by school staff. It is also important that administrators do not respond to classroom teachers who are willing to work with students with special learning problems by placing a disproportionate number of students who are at risk or have identified disabilities in their classrooms.

Observations, Conclusions, and Recommendations

Curtis (1995) as well as Graden (1988) have identified several challenges that can serve as disincentives or obstacles to implementing problem solving intervention through the use of school-level intervention teams. Keeping these challenges in mind as well as the findings of the researchers and authors of various studies reviewed in this report, the following are some final observations, challenges, and recommendations:

- The task or work of school-level teams have often been described as "prereferral intervention." Use of this term has resulted in many misconceptions including the view that the prereferral process is a first step in the special education decision-making process and is owned by special education. Clarification that school-level intervention teams are not special education eligibility or placement committees must be made to staff and to parents prior to model implementation (Schrag, 1995; Yau, 1988).

- Often school-level intervention teams go beyond their informal collaborative functions and are set up with more formal processes, centralized decision making, and specific relationships to special education. This type of team often does not operate more differently in their practices and assumptions than do multi-disciplinary teams within special education. School-based intervention assistance teams should clearly be focused on prevention and early assistance to classroom teachers.

- Successful pre-referral intervention such as school-level intervention teams can result in the

loss of state and federal funding as long as such funding is based on child count (e.g., numbers of children with disabilities receiving special education and related services). State and federal funding patterns must support preventative approaches by school-based intervention teams.

- Pre-referral strategies, including school-level intervention teams, will require administrative and funding support for planning, training, release time to consult, evaluation, and communication. State and federal funding patterns will need to assure that this support is available.

- A number of researchers have indicated that it takes about 3 years for implementation (Chalfant & Pysh, 1989; Fullan, Miles & Taylor, 1980; Ponti, Zins, and Graden, 1988). Sufficient time must be provided for careful planning and implementation.

- Clarification of the school-level intervention team model to be adopted by a particular school must include some concept and understanding of the roles that special educators and general educators will play. While some research indicates that "ownership" of the team process must lie with general educators (Pugach & Johnson, 1989), other researchers encourage a blending of responsibilities between the two traditional roles (Graden, 1989). Clarification of the relationship between education programs, staff, and funding is essential (CA State Department of Education, 1986).

- Special education and other support program personnel may fear that there will be a loss of jobs if pre-referral intervention teams are successful. In addition, general education teachers may be concerned that additional student problems may be "dumped" on them without training and support. All personnel (special and general educators) need to be assured that their roles, although changing, will be important in meeting diverse student needs.

- The implementation of school-level intervention teams and other pre-referral strategies will result in a number of changes in job responsibilities. School psychologists will spend less time testing and more time consulting with teachers and parents and working directly with students. Special education teachers will carry out more indirect, consultative assistance rather than direct intervention with students. Principals will be more directly involved in problem solving with teachers and other school staff.

- Implementation of school-level intervention teams can result in increased job responsibilities by building principals, classroom teachers, school psychologists and other school staff.

  Implementation of school-level teams can be perceived as a wavering commitment to special education programs and services and the rights of students with disabilities. School plans must value prevention assistance provided by problem solving teams, as well as specialized assistance that might be needed for individual students with disabilities.

- The implementation of school-level intervention teams can run the risk of becoming yet another layer of bureaucracy. Some may feel that this additional level can delay needed

services to children. School personnel implementing intervention assistance teams should avoid burdensome paperwork and administrative procedures required for teachers to access help with student problems.

- Implementation of an effective teams depends on well-conceived plans and adequate time to plan, involvement of all staff and the facilitation of the building principal.

- Sufficient, sustained, and ongoing staff development and administrative support/commitment are needed to facilitate implementation of effective school-level intervention teams.

- Parents must be involved in the planning and implementation of school-level teams so that they have clear information about the purposes and intended benefits. Further, parental involvement as team members must be clarified.

- Finally, it is essential that evaluation procedures be implemented so that the impact of school-based intervention teams can be documented. Such information can inform and improve assistance provided to classroom teachers.

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APPENDIX A

SUMMARY OF SOURCES

Study Source
Bay, B.T., Bryan, T., & O'Connor, R. (1994). Teachers assisting teachers: A prereferral model for urban educators, *Teacher Education and Special Education, 17*(1), 10-21.

Purpose of Study
To assess the effectiveness of a prereferral model for urban teachers which created a structure that fostered reflectivity among teachers as they worked together to analyze and generate solutions to challenging student problems and dilemmas.

Description of Team
Model included three components: Information Sharing sessions to assist teachers in acquiring new knowledge; Peer Exchange sessions in which teachers could generate possible strategies to be used; and Peer Coaching teams in which teachers coached each other in new strategies.

Type of Evaluation
Teacher interviews using open-ended questions about two students who were difficult to teach; pre- and post-observation conferences; and video-taping of teachers working with students in the classroom.

Evaluation Measures
Three sets of data were collected: referral rates at the end of the school year; teachers' responses to a series of open-ended questions in which they described the students they nominated as well as various dimensions of their work with these students and teachers' evaluations of all three components of the model.

Results
Although the sample was small, teacher collaboration team intervention (peer coaching) was successful in meeting the needs of 11 of the 16 students at risk for special education referral. All 9 teachers expressed satisfaction with the prereferral model in assisting them to work with students perceived to be at-risk for referral. Teachers perceived the Information Session to be places where they could enhance their knowledge about working with students with learning problems.

Recommendations/Observations
Success of this model was grounded in effective staff development; teachers must first acquire new knowledge about the teaching/learning process prior to having success with students who have learning problems. After being exposed to new knowledge, teachers must have the opportunity to interact with their colleagues. Finally, teachers are more likely to try new techniques when they have received guidance and feedback from colleagues. (Limitations of the study include size of sample, sample included only teachers who volunteered, no information provided regarding their history of referral rates; student nominations were limited to those who are academically challenged; and data was limited to self reporting. Future research should explore the effects of the model on student school performance.

Study Source
Beck, R. (1993). *Project RIDE (Responding to Individual Differences in Education).* Great Falls, Montana: Great Falls Public Schools.

Purpose of Study
To provide information regarding the impact of Project RIDE

Description of Team
A School-Wide Assistance Team (SWAT) is made up of regular classroom teachers and based on the premise that teachers are often their own best resource. Through a problem-solving process, the experiences and repertoires of educators are utilized in resolving problems commonly found among at-risk students. Three or four educators are selected or elected to serve on the SWAT for one to three years.

Type of Evaluation
Review of special education referrals, review of student evaluations/records, interviews, and surveys.

Evaluation Measures
Evaluation measures included referrals to special education, numbers of appropriate referrals to special education (e.g., numbers found eligible vs. ineligible); ability of teachers to resolve classroom problems without requesting outside assistance); and growth in social and academic behavior of elementary students.

Results
- During 1982-1989, there was a 56% reduction in students referred to special education post implementation of Project RIDE (including SWATs) in Great Falls, Montana during 1982-1989. In Ysleta ISD, El Paso, Texas, there was a 45% decrease in special education referrals from 1990-91 to 1991-92. In Baltimore Public Schools, Baltimore, Maryland, there was a 33% decrease in referrals from 1991-92 to 1992-1993.

- As a result of implementing Project RIDE, referrals to special education were found to be more appropriate; e.g., pre-RIDE implementation, 54% of students referred to special education were found to be ineligible; post-RIDE, 20% were found to be ineligible.

- During 1988-1989, nearly 80% of the cases referred to the SWAT were successfully handled in the Granite, Utah School District. There was little difference in the percent of successful cases when comparing males to females across grade levels. (males, 78%; females, 81%).

- Significant growth was demonstrated in social and academic behavior of elementary students in Natrona County Public Schools, Casper, Wyoming.

- Teachers in Great Falls Public Schools, Montana; Jordan and Granite School Districts, Salt Lake City; Utah, and Ysleta School District, El Paso, Texas were found to have increased skills to resolve classroom problems without requesting outside assistance.

Recommendations/Observations
None provided although the following are provided to assist classroom teachers and other school personnel: evaluation strategies, Computer Tactics Bank, and Video Library.

Study Source
California State Department of Education (1986, June). *Existing student study team process in selected volunteer special education local plan areas, school districts, and schools in California: A descriptive evaluation study*. Sacramento: Author.

Purpose of Study
To present the culmination of findings and recommendations of a series of working papers on a project which conducted a study of the implementation of Student Study Teams in nine California special education local plan areas.

Description of Team
Student Study Teams address individual student assistance needs, regardless if student has special education identification. Team processes varied greatly across school settings, but three operations were present in all: someone has a concern regarding a student, requests assistance, and brings case to team at school; at least two persons meet to discuss case and make decisions; and one or more participants follow decisions made at meeting. Process is cyclical and continues until concern is resolved.

Type of Evaluation
Cooperative case study approach using surveys and review of student records.

Evaluation Measures
Data was gathered regarding the nature of Student Study Team processes, the type of problem characteristics of students brought to the attention of Student Study Teams, and the impact of Student Study Teams.

Results
Results indicated that school staff feel Problem Solving Teams are generally effective in addressing their multiple, student-oriented purposes. The four most common students "problem" characteristics addressed Student Study Teams include: general academic performance, social/emotional adjustment, academic behavior, and reading. Significantly more boys than girls were referred to the Student Study Teams. The most frequently-recommended type of modification/ intervention was referral for intervention by a person outside the regular classroom.

Recommendations/Observations
Recommendations for policy-makers, trainers, school staff, parents, and students include the following:

- There is a need to clarify the relationship between general and special education programs, staff, and funding.
- There is a need to distinguish between student study team processes and the IEP team process for special education eligibility.
- There is a need to think of students student team process as complementing both general and special education not as a substitute for either.
- It is important to recognize that student study team process is not way of saving money on special education programs.
- Local schools should be permitted to make own decisions regarding the team process.
- Compliance and auditing practices need to be modified to encourage voluntary operations of student study teams.
- There is a need to study relationship between guidance/counseling services and the team process.

Study Source
Chalfant, J. C., Pysh, M., and Moultrie, R. (1979). Teacher assistance teams: A model for within-building problem solving. *Learning Disabilities Quarterly*, *2*, 85-96.

Purpose of Study
To provide a discussion of the use of Teacher Assistance Teams (TATs) to provide assistance for regular classroom teachers in meeting the needs of students with learning and behavior disorders in the classroom.

Description of Team
TAT core team consists of three regular classroom teachers with the referring teacher as the fourth and the parent as the fifth member. One person has the responsibility and authority to coordinate team activities. Each building should develop its own operating procedures.

Type of Evaluation
Review of special education referrals.

Evaluation Measures
Numbers of special education referrals were tracked.

Results
The Teacher Assistance Teams were able to handle 63.5% of teacher referrals within the building. Therefore, the number of potential referrals to special services were reduced by more than half.

Recommendations/Observations
None provided.

Study Source
Chalfant, J. C., and Pysh, M. (1989). Teacher assistance teams: Five descriptive studies on 96 teams. *Remedial and Special Education, 19*(6), 49-58.

Purpose of Study
To present data and information regarding the impact of Teacher Assistance Teams on the referral and student identification process for special education services as well as on teachers' attitudes, and factors related to team effectiveness.

Description of Team
The Teacher Assistance Team is a school-based problem-solving unit used to assist teachers in generating intervention strategies consisting of a core of three elected faculty members from various grade levels or disciplines who assist other teachers. The fourth member is the classroom teacher who requests assistance. Other members might include school principals, special education personnel, and parents.

Type of Evaluation
This is a descriptive study using a progress report questionnaire to obtain information from administrators, classroom teachers, and team members during the first year of team operation.

Evaluation Measures
Goals set for each child, actions taken to resolve them, reasons for team effectiveness, impact of team intervention on student performance, teacher satisfaction and concerns, and data regarding the special education referral and identification process.

Results
Results were provided for five program development studies conducted between 1979 and 1988 on 96 first-teach teacher assistance teams in seven states: Alaska, Arizona, Illinois, Kentucky, Maine, Maryland, and Nebraska. The number of goals per student ranged from 2 to 4.9, with an average of 4 per student. Of the 1,263 goals, 57% were nonacademic goals and related to work habits; 14% related to classroom behavior, 11% related to interpersonal behavior, and 7% related to attention.

The team-planned interventions were successful for 103 (88.7%) of students without disabilities in Arizona, Illinois, and Nebraska. Of the 116 students only 13 students without disabilities were not helped by the team process. Assistance was requested and successful for 3 mainstreamed students with disabilities. The teams were unsuccessful for 54 students who were referred to special education for testing and found to be eligible. Using a 5-point Likert scale, no differences were found in student progress toward intervention goals for students at the elementary and high school levels or among schools in the urban, suburban or rural and remote areas.

Of 112 students assisted by teams in Maryland and western Alaska, 44% were rated as having great or considerable progress; 35%, moderate; and 21% , little or no progress. During 1993-1994, TATs assisted 199 students in Illinois, Maine, Maryland, and Nebraska and successfully resolved the problems of 143 (72%) of the students served.

Twenty one percent of the 386 students discussed by the teams were referred to special education. A 63.6% drop in the number of inappropriate referrals was noted. Of the 218 teachers surveyed in 64 schools, and 84% responded. Of the responses, 88% were positive and 12% were negative. Seventy five percent of the positive statements included: group problem solving generated useful strategies, moral support and reinforcement to teachers was helpful, and student performance and behavior improved. Concerns included insufficient time for team meetings and interactions, failure to generate useful intervention strategies, interference with the special education referral process, lack of faculty readiness to initiate the team, and little or no impact on student progress.
Support from the building principal was cited as a key factor by 21 (91%) of the 23 teams. Faculty support and participation was mentioned by 11 of the 23 teams as related to team effectiveness. In addition to faculty support, administrative support, positive attitudes by service providers, team training, team efficiency, networking with other teams, and use of evaluation practices were viewed as important to success. Fourteen (61%) of the 23 teams viewed limited teacher support as a concern. Insufficient resources was also indicated as a teacher concern. Of the 218 teachers (overall response rate of 89%), 89% of the teachers felt that TATs were of assistance to them, while 12% did not.

Recommendations/Observations
Six major recommendations were made:

1. Strong administrative support is needed; e.g., principal support, principal attitude, and time for planning.
2. Effectiveness is dependent largely on teachers' willingness to be involved with and to use the process.
3. Teams need sufficient training.
4. Care must be taken in establishing efficient team procedures.
5. Teams are more effective and likely to continue long term if they have a networking support system during the first few years.
6. Evaluation of team effectiveness is crucial.

Study Source
Chalfant, J.C., Pysh, M., Miros, R., Balkman, K., Bradshaw, M., and Bradshaw, E. (1991). *Teacher Assistance Teams: Supporting at-risk students in rural areas: A three year plan.* Conference Proceedings, Rural Education Symposium, Nashville,TN (ERIC Document Reproduction Service No. ED 341 535).

Purpose of Study
To discuss the sequence of events followed by the Arkansas Department of Education and 55 local education agencies to implement Teacher Assistance Teams and to provide evaluation information regarding Team impact.

Description of Team
TAT core team with additional team members.

Type of Evaluation
Survey of participating teams and review of student process.

Evaluation Measures
Evaluation measures included extent of special education eligibility following TAT intervention and level of student success..

Results
Of 1,939 students who received school-wide strategies, only 13 students were referred to special education for testing and 6 were determined to be eligible. Using a 5-point rating scale, teams judged network meetings to be very beneficial in four areas--the TAT process, sharing ideas, providing additional intervention strategies, developing support systems, and sharing classroom strategies. Of the 77 cases for whom outcome data was reported, 30% were successfully resolved; 40% were partially resolved; 14% were partially resolved and referred to special education; 10% were partially resolved and referred to another resource; 5% were referred directly to special education; and 1% were referred directly to another resource.

Recommendations/Observations
Administrative support for teams is a critical factor in their development. For successful implementation, participation of schools must be voluntary. The school principal is a critical factor in initiating and maintaining team. Systematic initial and the process of TAT, sharing ideas, additional intervention strategies, developing support systems, and sharing classroom strategies. Of the 77 cases, 30% were successfully resolved, 40% were partially resolved, 14% were partially resolved and referred to follow-up training is essential. Another critical factor in creating team success is on-going support and contact after training. A simple and easily understood evaluation plan is essential to providing data regarding team effectiveness. Sufficient planning time is also needed.

Study Source and Purpose
Cosden, M.A. & Semmel, M.I. (1992). Teacher assistance teams: A conceptual and empirical review. *Special Services in the Schools*, *6*(3/4), 5-25.

Purpose of Study
To provide a conceptual and empirical review of the literature regarding Teacher Assistance Teams (TATs).

Description of Teams
TATs are school-based problem-solving teams which assist teachers with difficult-to-teach students and serve to decrease inappropriate referrals to special education. The primary goal of TATs is to use group resources to develop alternative instructional strategies and support teachers in developing and implementing interventions. TAT composition varies & ranges from TATs comprised solely of specialists trained to engage in specific team activities to those which utilize personnel across disciplines. School principals also participate on some TATs.

Type of Evaluation
Literature review was provided.

Evaluation Measures
An empirical evaluation of TAT research was reviewed including impact on referrals to special education and on numbers of appropriate referrals to special education; teacher and team attitudes/satisfaction; indirect references to changes in teacher attitudes, tolerance, and skills; and improved student performance.

Results
Results indicated that while the effects of TATs were not well evaluated some conclusions can be drawn:. number of referrals to special education decrease with TAT use; numbers of more appropriate referrals to special education increase; TATs are successful in meeting student behavioral and learning needs (although results are mixed); There is support for TAT functions; however, TAT members are concerned about having the necessary resources to implement recommended interventions.

Recommendations/Observations
There is a need for future research on effective TATs. Assistance needs to be provided to Teams in the implementation of plans. Early and on-going resources must be made available. Referring teachers must feel ownership of recommended intervention. There must be effective & efficient use of time in team meetings. Training in team functioning must be provided. The effectiveness of TATs must be assessed in relationship to individual models of consultation and collaboration.

Study Source
Flugum, K. and Reschly, D. (1994). Prereferral interventions: Quality indices and outcomes. *Journal of School Psychology, 32*(1), 1-14.

Purpose of Study
To determine the extent to which prereferral interventions are actually provided and the quality of such interventions; and to identify characteristics that differentiate successful from unsuccessful prereferral interventions.

Description of Team
School personnel utilized a problem solving team approach to assist classroom teachers to work with students having learning problems.

Type of Evaluation
Questionnaire survey of teachers and related service providers.

Evaluation Measures
Evaluation measures were the following quality indices of interventions: Did the behavior improve? What was the degree of improvement? Were the goals of the intervention accomplished?

Results
Analyses indicated a low implementation rate of five of the six specific quality indices. Slightly more than half of the teachers (53%) and fewer than half of the related service providers (44%) indicated that a step-by-step implementation plan was used. 78% of the teachers and 71% of the related service providers indicated that the intervention was implemented as planned. Fourteen percent of the teachers and 18% of the related service providers reported that the prereferral intervention did not include any of the quality indicators. Correlation coefficients for related service providers' responses indicated a relationship between the use of quality indices and positive student outcomes. Teacher responses produced fewer significant correlations between the quality indices and outcome measures with only the use of behavioral definitions and treatment integrity significantly associated with positive student outcomes. For teachers, only one significant correlation was found; e.g., the number of quality indices with the improvement of behavior. For the related service providers, two of the outcome measures were significantly related to the number of quality indices (improvement of behavior and better student functioning). For the related service providers, two of the outcome measures were significantly related to the number of quality indices (improvement of behavior and better student functioning). Despite the low implementation of quality indices in prereferral interventions, those interventions that did involve such indices were seen as more successful by regular education teachers and related services personnel.

Recommendations/Observations
Prereferral interventions will not be effective until they are provided on a regular basis and meet reasonable standards of quality. Continuing education is needed to further develop professional skills in implementing quality interventions. Further research is needed on how the knowledge base for markedly improved prereferral interventions can be operationalized within various systems. Further analysis of the variables that contribute to an effective intervention is also needed.

Study Source and Purpose
Fuchs, D. & Fuchs, L.S. (1989). Exploring effective and efficient prereferral interventions: A component analysis of behavioral consultations. A descriptive & evaluative study, *School Psychology Review, 23*, 260-283..

Purpose
To assess effects of three increasingly-intensive versions of the Behavioral Consultation model on problem behavior in mainstream classrooms as an effort to develop an effective and efficient approach to prereferral intervention.

Description of Team
The study examined the Behavioral Consultation (BC) model of teacher consultation. The Mainstream Assistance Team implementing the BC model included a general education teacher, who identified at least one difficult-to teach pupil at risk for special education referral engaged in systematic BC with a school-based consultant (a special education resource room teacher, a school psychologist or a pupil personnel specialist. The model is designed to strengthen general educators' instruction and management in order to decrease problematic student behavior in the general education classroom. BC incorporates four stages: problem identification, problem analysis, plan implementation & problem evaluation.

Type of Evaluation
Quantitative data analysis, including analysis of BC components.

Evaluation Measures
The effectiveness of BC on student behavior was measured via teacher ratings and direct observations of students' classroom behavior.

Results
Overall, students in BC model exhibited stronger decreases in problem behavior than those in the control group (note: teacher/consultant reports supported this decrease, while observations did not). Interventions employed in classrooms were poorly conceptualized and/or executed.

Recommendations/Observations
The consultative process requires greater directiveness. It is important to refine and limit the variety of interventions from which the teacher and consultant choose. Ongoing research can help to assess whether the BC model involving the use of written scripts can be an effective and efficient consultative process and set of classroom-based interventions that will facilitate the implementation of prereferral intervention/consultation.

Study Source
Fuchs, D. and Fuchs, L. (1991) Mainstream assistance teams to accommodate difficult-to-teach students in general education. In: *Alternative Educational Delivery Systems*. Rockville, MD: National Association of School Psychologists.

Purpose of Study
To describe the Mainstream Assistance Teams, including an evaluation on how it has worked during the first year.

Description of Team
A problem solving behavioral approach to consultation involving teams of special support personnel providing assistance to general educators. MATS employ a multi-disciplinary team composed of a building-based school psychologist and a special educator as well as a general educator with a targeted difficult-to-teach student. Team members follow written scripts intended to contribute to proper use of behavioral consultation. Stages of behavioral consultation include problem identification, obtaining an estimate of the frequency or intensity of the behavior, problem analysis, plan implementation, and evaluation of intervention carried out.

Type of Evaluation
Description of setting to which MATs were designed to conform; multi-source, multi-method approach using consultant evaluations, teacher ratings, and classroom observations.

Evaluation Measures
Indices of student performance and teacher behavior, as well as rate of teacher referrals to special programs were used. Measures included the Revised Behavior Problem Checklist, the Teacher Efficacy Scale, and the Stallings Observation Instrument. Teachers rated the severity, manageability and tolerableness of their most difficult-to-teach pupils target behavior on a pre-and post MAT basis.

Results
Using a four-point scale (1= MATs were an unqualified failure...4= MATs were an unqualified success), consultants' mean evaluation of Script 1 (least inclusive version) was 2.0; 1.8 for Script 2 (more inclusive version) and 2.9 for Script 3 (most inclusive version). Pre-post ratings of student severity, manageability, and tolerableness of the most difficult-to-teach pupils indicated that teachers claimed that control student's problematic behavior decreased least; targeted behaviors of students in the most inclusive service of behavioral consultation decreased most. Relatively inclusive versions of behavioral consultation seemed to be regarded as effective and viewed with satisfaction; the least inclusive variant of behavioral consultation was perceived to be as ineffective and viewed with dissatisfaction. Classroom observations indicated that control students did not display a pre-intervention to post-intervention decrease in targeted troublesome behavior; rather this group's behavior increased by 9%. The greatest percentage decrease in troublesome behavior (8%) was associated with the least inclusive variant of behavioral consultation, or Script 1, which was the script that consultants and teachers viewed as least effective and least satisfying. Students involved with Script 3 activity displayed no change in problem behavior from pre-to post-MAT observations.

Recommendations/Observations
Study findings refute the assumption that "more is better". In addition, findings indicate that visits by consultants contribute to desired changes in pupil behavior. More inclusive forms of consultation caused positive changes in teacher attitudes. This study also points out the need for teachers to be sufficiently skilled to formulate and operationalize meaningful interventions. Future directions for the MAT Project pointed toward the importance of the required use of contingency contracts and data-based monitoring procedures between teachers and their targeted students. In addition, the use of written scripts can make consultation more directive in providing greater direction to teacher and in assisting in the implementation of consultation in a timely manner.

Study Source
Fuchs, D., Fuchs, L., and Bahr, M. (1990). Mainstream assistance teams: A scientific basis for the art of consultation. *Exceptional Children, 57,* 128-139.

Purpose of Study
To determine whether a consultant-driven prereferral intervention team may be shortened in duration, thereby improving its efficiency, without reducing its effectiveness.

Description of Team
Multi-disciplinary Assistance Teams trained in behavioral interventions provided assistance in four inner-city middle schools.

Type of Evaluation
Experimental/control study in which teachers were assigned randomly to a short (n=24) and long (n=24) term version of prereferral intervention and to a control group (n=12).

Evaluation Measures
Pre-to post-test ratings were provided of the severity, manageability, and tolerability of students' target behavior on the MAT; pre- to post-test ratings on student's anxiety on the Attention Problems and Anxiety-Withdrawal Scales of the RBPC. Other measures included referrals to special education; and teacher perceptions of their difficult-to-teach students.

Results
Analyses indicated that the two variants (short and long version) of the prereferral intervention improved teacher perceptions of their difficult-to-teach students and decreased referrals for testing and possible special education placement. Results also suggested that the short and long versions were equally effective.

Recommendations/Observations
This research is a part of building a packaged prereferral intervention approach; e.g., a multi-faceted intervention that has been pre-assembled through efforts to validate empirically tested parts. Effective consultation requires the melding of art and science.

Study Source
Fuchs, D., Fuchs, L., Gilman, S., Reeder, P., Bahr, M., Fernstrom, P., and Roberts. H. (1990). Prereferral intervention through teacher consultation: Mainstream assistance teams. *Academic Therapy*, *25*(3), 263-276.

Purpose of Study
To describe prereferral intervention assistance provided by Mainstream Assistance Teams (MATs), including a summary of the impact of MATs.

Description of Team
MATs provide a behavioral consultation model in which a consultant intervenes directly with a student through consultation with the student's teacher. Consultation provided involves four interrelated stages: problem identification, problem analysis, plan implementation, and problem evaluation.

Type of Evaluation
Evaluation measures included observational study on 103 difficult-to teach (DTT) students and rating scales and questionnaires administered to their teacher.

Evaluation Measures
Frequency of DTT students' problem behavior and attitudes of teachers related to MAT assistance provided.

Results
Results indicated that the intervention dramatically reduced the frequency of most DTT students' problem behavior and caused a majority of teachers to become more positive toward these pupils. In addition, the DTT students were significantly less likely to be referred to special education than similar students in control groups.

Recommendations/Observations
Practitioners planning to implement MAT prereferral procedures should obtain pre-and post-intervention data to validate them for their settings and to document the effects on each student participant.

Study Source
Graden, J. (1988). *Prereferral evaluation studies: A research synthesis.* Prepared for the Office of Special Education Programs Decisions Resources Corporation. University of Cincinnati.

Purpose of Study
To summarize four studies (California, Kansas, New York, and North Carolina) as well as supporting findings from independent research on prereferral intervention. The research on prereferral intervention is critiqued, and relevant issues pertaining to the research are discussed. Implications for policy, practice, and future research needs are also highlighted.

Description of Team
Teams implemented within studies cited were labeled using different terms such as Teacher Assistance Teams, Student Success Committees, School Site Solution Committee, Problem Solving Groups, and Prereferral Teams.

Type of Evaluation
The California study utilized a 15-page questionnaire on team process and a 2-page log to document team decisions.The Kansas study focused on a statewide survey of prereferral team practices, including systematic record review and interviews. The New York study reviewed district referral rates and looked at prereferral team interventions as well as any other additional instructional option and support services provided for classroom teachers. The North Carolina study attempted to evaluate the effect of training different types of training (on-site training for prereferral team only, on-site training for prereferral team and teachers, videotape training, and no training) of school personnel on school practices with regard to prereferral interventions within 24 elementary and secondary schools.

Evaluation Measures
California looked at team process and team decisions as evaluation measures. The Kansas study focused on evaluation measures such as numbers of students receiving prereferral intervention from teams, documentation of interventions tried, types of interventions received, subsequent referral for special education, and perceived strengths of the prereferral intervention team process. New York utilized evaluation measures such as classification rates, as well as numbers and kinds of interventions provided. In the North Carolina Study, the effect of training on referral practices in the schools was monitored; however, no attempts were made to contrast the schools trained according to the different methods.

Results
California:
- Prereferral team process resulted in decreased numbers of formal referrals for assessment.
- Teams were thought to be most effective when the team process was collaborative and based on shared responsibility, and when there were clear procedures for organization of the process.
- Teachers were satisfied with prereferral intervention assistance received from teams.

Kansas:
- Although prereferral intervention procedures were mandated, they often were not documented and did not seem to have been implemented for students prior to their placement in special education.
- Further, there was no follow-up information on the effectiveness of the intervention in 84% of the files of students in LD programs and 76% of the students in BD programs.
- The majority of interventions documented were changing seats and contacting parents which are typically considered weak interventions with little change of significantly altering specific behaviors.
- In "successful" teams, only 50% of referred students were subsequently tested, compared to 80% of students referred to "non-effective" teams.
- A perceived strengths of the prereferral process was that it enabled the sharing of intervention ideas and there was team support for decisions.
- Perceived weaknesses were that the process took too long, and there was too much paperwork involved.
- Teachers had received the least amount of inservice training about the process.

New York:
- Districts with high and low classification rates did not differ in the availability of options, but they did differ in the use of the options.

- Notable differences were found in low and high classification rates with low classification rates being more collaborative, more instructional interventions being used, teachers having more responsibility for interventions, more non-special education resources available, more options per pupil provided, and more collaborative decisions to refer.
- Teachers in low classification rate schools recommended more instructional options for the student than did teachers of high classification schools, and teachers in the low classification rate schools were also less likely to refer students for special education evaluation.

North Carolina:

- There was an increase in the number of students receiving assistance.
- There was a decrease (42%) in the number of students tested.
- There was a significant reduction in the number of days from teacher referral to student assistance (from 69 days in direct special education referral procedures to 8 days in prereferral procedures).

Recommendations/Observations

- Prereferral procedures result in decreased testing rates.
- Classroom teachers are satisfied with prereferral intervention.
- Direct instructional interventions are most effective.
- Systematic monitoring and evaluation of intervention outcomes is important.
- Resources are needed to support classroom-based interventions.
- Collaboration is important to support the prereferral intervention process.
- The change process takes time.
- Administrative support is crucial to the successful implementation of prereferral intervention programs.

Study Source
Graden, J., Casey, A. , and Bonstrom, O. (1983) Pre-referral interventions: *Effects on referral rates and teacher attitudes.* Research Report No. 140. University of Minnesota: Institute for Research on Learning Disabilities.

Purpose of Study
To assess the effects of pre-referral interventions on referral rates and teacher attitudes.

Description of Team
Consultative model aimed at helping teachers intervene at the source of student problems (in the regular classroom). Consulting teachers and other special service staff provided consultation and intervention.

Type of Evaluation
Teacher survey in the fall and spring; on-going monitoring of referral rates.

Evaluation Measures
Teacher beliefs about special services and teacher expectations about the referral-to-placement process.

Results
Results of the project to implement a pre-referral intervention procedures as an alternative to traditional referral-placement practices were mixed. However, there were some encouraging positive results regarding reduced special education placements, referral-to-placement rates, and increased referrals for consultation in one school. The remaining two schools showed little change in referral, testing, and placement rates and numbers. There were also no changes over the course of the year regarding teachers' beliefs, expectancies, and preferences about special services. Several teachers reported preference for a system designed to provide useful suggestions and assistance. Consulting teachers were generally viewed as helpful by teachers. Principals in the three participating schools all reported favorable perceptions regarding the impact of the prereferral intervention in increasing teacher tolerance and competence to work with problem students,

Recommendations/Observations
Change is often slow with resistance to new ideas. Schools that exhibit change must have strong internal support for the systems change including strong administrative support for the role of the consulting teacher and others providing assistance to classroom teachers. It is important to deal with the mystique of testing, labeling, and placement students in special education because it can inhibit attempts to make changes. There is also a need to deal with class sizes and restricted options for curricular modifications.

Study Source
Graden, J., Casey, A., and Bonstrom, O. (1985). Implementing a prereferral intervention system: Part II. The data. *Exceptional Children, 51*(6), 487-496.

Purpose of Study
To provide a rationale and description of the prereferral intervention model as the first phase in the special education services delivery system, including data on consultation, referral, testing, and placement rates.

Description of Team
Consultative model of service delivery involving a consulting teacher model was implemented in schools 1, 2, and 3. In schools 4, 5, and 6, the prereferral intervention system was implemented by the school psychologist.

Type of Evaluation
Descriptive Study

Evaluation Measures
Evaluation measures included rates of consultation use, level of special education referrals, numbers of students placed in special education.

Results
1. In School l, the numbers of students referred for child study and who were tested and placed remained fairly constant across Years 1 and 2 (baseline and implementation; numbers of children tested and placed increased in the post implementation year.

2. In School 2, there was an increase in the use of prereferral intervention during the implementation year and a decrease in absolute numbers of students tested and percentage of referred students in year 2.

3. In School 3, which continued implementation in Year 3, some dramatic shifts were seen in Year 2 (implementation year), with large numbers of students referred for prereferral consultation, fewer students tested, and fewer placed in special education.

4. In Schools 4, 5, and 6, there were similar overall trends in terms of a high demand for consultation, significant decreases in numbers of students tested, and significant decreases in numbers of students placed in special education

Recommendations/Observations
Positive results in prereferral intervention can be seen if intense consultation is provided. Administrative support and adequate resources (personnel and time for consultation) are needed. In successful schools, consultation is the primary role of at least one person with additional support provided by other building-level personnel. Well-trained consultants and other school level personnel provided assistance can help counter resistance from classroom teachers. Successful schools also need stimulus for change; e.g., an internal impetus for change is crucial. For successful implementation, careful planning must be undertaken.

Study Source:
Harrington, R. G. & Gibson, E. (1986). Pre-assessment procedures for learning disabled children: Are they effective? *Journal of Learning Disabilities, 19*(9), 538-541.

Purpose of Study:
To explore teacher attitudes toward the pre-assessment process. Specifically, teachers' perceptions regarding the pre-assessment team's intervention recommendations, the pre-assessment team itself, and the teachers' personal perceptions of the overall pre-assessment process and how they reacted to it were evaluated.

Description of Team:
Questionnaires surveyed teachers in Kansas who had experience with pre-assessment procedures. The pre-assessment procedures were not defined. In addition, the composition of the teams providing pre-assessment was not described.

Type of Evaluation:
Questionnaires sent to a random sample of 150 certified teachers.

Evaluation Measures:
Questionnaires included 25 Likert-type items and were grouped into three comparison areas: teachers perceptions regarding the pre-assessment team's intervention recommendations, the pre-assessment team process, teacher personal perceptions of the overall pre-assessment process, and teacher reactions to the assistance provided were evaluated.

Results:
Response rate of usable questionnaires (from those currently-practicing teachers who had experience with pre-assessment procedures) was 27%. Teachers agreed that the intervention recommendations made were appropriate, but 34% of respondents felt that the initial recommendations were not successful in helping to correct the referral problem. The majority of teachers were satisfied with the pre-assessment team, felt that the team understood the referral problem, and thought their opinions as teachers were respected. Teacher responses regarding the actual implementation of recommended interventions and were split regarding whether they refer fewer students since implementation of the pre-assessment procedures.

Recommendations:
Administrative attitude/support is necessary for success of the pre-assessment process. There is also a need to address teachers' concerns regarding the length of time involved in team process. Attention must be paid to gaining parental support and improving home-school communication. Such support is valuable in developing successful in-class program interventions. Teachers support a team composed of the school psychologist, social worker, the child's former teacher(s), parents, and other special service workers, as needed.

Study Source
Hayek, R. (1987). The Teacher Assistance Team: A pre-referral support system. *Focus on Exceptional Children, 20*(1).

Purpose
To provide an overview of the functions and impact of Teacher Assistance Teams (TATs).

Description of Team
Teacher Assistance Team memberships vary, depending upon team function. Team membership usually includes referring teacher, other teachers recognized for instructional expertise & an administrator who acts as the instructional leader, support and special education personnel, and parents. TATs serve as both a preventive precursor to special education referral and also as a method of meeting individual needs of students who are not eligible for special education services. Teachers develop professional knowledge.

Type of Evaluation
Review of literature findings.

Evaluation Measures
This study produced a synthesis regarding team structures, procedures, and attitudinal and other evaluation data.

Results
Teacher Assistance Teams slow chronic referrals for special education eligibility. The majority of teachers felt time and paperwork was a deterrent to the use of team. Reduced student failure is noted as a result of team interventions. For example, recommendations may reduce costs associated with grade retention. Teams are effective in helping most referred students avoid failure.

Recommendations/Observations
There is a need to build working partnerships between general and special education.
Administrative support is critical. Training is essential and well as the provision of release time, clerical support, and policy guidelines for use of TATs. Statewide plans should be developed centering on financial support, assignment of personnel, development of a communication network, use of training and publicity.

Study Source
Kovaleski, J.F. , Tucker, J.A. & Duffy, D.J. (1995). School reform through instructional support: The Pennsylvania initiative. In: *Best Practices in School Psychology*. Rockville, MD: National Association of School Psychologists.

Purpose
To provide an overview of instructional support being provided by Instructional Support Teams being mandated and implemented within Pennsylvania, as well as to provide an overview of evaluation results of the first phases of implementation.

Description of Team
Instructional Support Teams (IST) are mandated by a 1990 state law to be implemented in every Pennsylvania elementary school. Team membership varies, but always includes the building principal, the student's classroom teacher, and a support teacher. The support teacher is selected by the school district. Intervention by ISTs is a precursor to special education referrals (preventive).

Type of Evaluation
Validation process required by all school districts consisting of interviews with team members, parents, teachers and students, observation of classrooms and team meetings, and a review of student records.

Evaluation Measures
Data was gathered on numbers and percentages of student population identified for instructional support, rate of referrals for special education evaluations, and grade retention rates.

Results
During the 1992-1993 school, data indicated that teachers in non-IST schools refer approximately 3% of the student population for special education, while teachers in IST schools refer 2% or less of the population, (a decrease of between 33% and 46%). A substantial difference was noted in the actual number of students who are placed in special education as a result of instructional support; e.g., a difference of between 38% and 48% between IST and non-IST schools. There was also a substantial decreases in the use of retention in grades during the years of implementation of instructional support; e.g., 67% decrease in the use of retention. Schools in the third year of IST implementation identified 10.7% of the student population for non-special education instructional support; those schools in the second year of IST implementation identified 9.6%, and those in the first year identified 7.4%.

Recommendations/Observations
Use of support teachers are essential. Team evaluation components must also be included. It is also important to specify carefully the needed components of training prior and during implementation.

Study Source
Kruger, L., Struzziero, Watts, R., and Vacca, D. (1995). The relationship between organizational support and satisfaction with teacher assistance teams. *Remedial and Special Education, 16*(4) 203-209.

Purpose of Study
To investigate four types of organizational support needed for a collaborative problem-solving structure, the Teacher Assistance Team: administrative support, perceived purpose of the TAT, social support among staff, and TAT training; as well as the satisfaction of both TAT members and the consumers of their services.

Description of Team
Teacher assistance teams included general education teachers (48.2%); special education teachers, 15.8%); principals (14.5%); and support personnel such as guidance counselors (18%). The most frequent chair of the TATs was the principal (40.7%).

Type of Evaluation
Questionnaire survey completed by personnel from participating schools:

Evaluation Measures
Measures of satisfaction using a Likert-type scale (1, very dissatisfied to 6, very satisfied) were utilized. In addition perceptions of administrator support, perceived purpose of the TATs and social support using a Likert-type scale; and social support were measured by three subscales of the Social Provisions Scale.

Results
The mean TAT satisfaction for TAT members and consumers of the TAT services were 4.89 and 4.25, suggesting that both groups were more than slightly satisfied with their TATs. The mean satisfaction score for TAT training was 4.45 on the 6-point Likert scale.

Recommendations/Observations
Administrators should seek to provide staff with positive feedback regarding team implementation and participation. Attention should also be paid to the perceived purpose of the TAT. TAT members should be taught how to rely on one another for problem-solving assistance. Consumer reactions need to be evaluated.

Study Source
McKay, B & Sullivan, J.. (1990, April 25). *Effective collaboration: The student assistance team model*. Paper presented at the Annual Convention of the Council for Exceptional Children. Toronto. (ERIC Document Reproduction Service No. ED 322 695.)

Purpose
To describe the collaborative technique used by a school-based Student Assistance Teams, as well as initial evaluation information.

Description of Team
The Student Assistance Team is a building-level team available to any teacher. Membership was not specified. Student Assistance Teams addresses individual student issues both prior to special education placement and after placement in mainstream general education programs.

Type of Evaluation
The evaluation design/procedures were not provided.

Evaluation Measures
Evaluation measures included numbers and percentages of students referred to special education, as well as numbers of special education referrals resulting in "no exceptionality: determination. Observations of teacher behavior change were also measured.

Results
In the initial SAT implementation year, across eight schools, there was a 28-78% decrease in the number of referrals to special education was noted. Teachers began to serve student problems independently and with SAT assistance. Regular classroom teachers extended their assistance to other unidentified students with learning and behavior problems. There was a decrease in the number of evaluations resulting in "no exceptionality".

Recommendations/Observations
There is a need to provide for a variety of interventions, including non-school based. A list of considerations when planning interventions should also be provided for classroom teachers.

Study Source
Nelson, J.R., Smith, D.J., Taylor, L., Dodd, J.M., Reavis, K. (1991). Prereferral intervention: A review of the research. *Education and Treatment of Children, 14*(3), 243-253.

Purpose of Study
To review available research on the efficacy of a variety of prereferral intervention teams.

Description of Team
The prereferral interventions reviewed included: Teacher Assistance Team (includes the referring teacher and elected faculty); School Consultation Committee (includes regular and special education teachers); Prereferral Intervention Model (involves a consultant provides assistance to classroom teachers); Teacher Resource Team (outside consultant trains regular classroom teachers and building-level specialists to provide consultation, technical assistance, and inservice training to regular classroom teachers); Mainstream Assistance Team (consultants, alone or in conjunction with the multi-disciplinary team assist teachers identify and analyze problems); and Peer Problem Solving Team (a peer assists referring teacher).

Type of Evaluation
A literature review of 16 published studies.

Evaluation Measures
Articles were examined and synthesized based on results regarding the effect of prereferral intervention teams on special education services delivery practices, effect on student performance, effect on the abilities and attitudes of teachers, effect of prereferral interventions on classification rate, and analyses of prereferral intervention used by teachers.

Results
Prereferral intervention approaches can reduce the number of students referred for formal assessment and then placed in special education. The strategies implemented under the prereferral intervention process more often than not produce the desired student performance. The prereferral intervention process increases the abilities of teachers to educate students who are experiencing difficulty and improves teachers' attitudes toward such students.

Recommendations
A comprehensive approach to the conduct of prereferral intervention should include: clearly-defined goals and objectives; the selections of educators and other professionals with expertise and training to implement the approach (i.e. knowledge of intervention strategies appropriate for general education environments and of processes to facilitate collaboration); the resources necessary to successfully implement the prereferral procedures and interventions; and formative and summative evaluation procedures to judge the effectiveness of the prereferral approach. In addition, preservice and inservice training should help educators identify, develop and implement interventions applicable for the collaborative process within the general education environment. Future research must include studies of the effect of prereferral on student performance, and should include both short-term and longitudinal comparative studies on the academic and social behaviors of students relative to those observed in more traditional special and general education settings.

Study Source
Nelson, J.R., Smith, D.J., Taylor, L. , Dodd, J.M. & Reavis, K. (1992). A statewide survey of special education administrators regarding mandated prereferral interventions. *Remedial and Special Education, 13*(4), 34-39.

Purpose
To present the results of a survey of all prereferral intervention approaches used, by state mandate, in one western state, including a consultation model, teacher assistance team, mainstream assistance team, peer problem solving, Project RIDE, and other approaches.

Type of Evaluation
A survey of special education administrators in the state's 40 school districts (90% response rate).

Evaluation Measures
Data on percentage of districts using types of prereferral intervention models, beliefs about efficacy, and impact of process was included as evaluation measures within the statewide survey.

Results
Special education administrators believe that prereferral intervention maintains students in regular classes and results in fewer referrals. Administrators were uncertain whether specific approaches assist teachers in meeting the learning needs of their students. Administrators felt that the prereferral team process can create bureaucratic hurdles.

Recommendations/Observations
Several recommendations were made for areas of future research:

- Effectiveness of indirect special education services for changing student performance.
- Identification approaches used nationally.
- Procedures for monitoring and evaluating effectiveness of statewide prereferral intervention mandates.

Study Source
Ohio State Department of Education (1988, August). *Intervention assistance teams. Sharing the responsibility for success.* Columbus, Ohio: Author.

Purpose
To outline the ways in which elementary school educators from seven Ohio school districts implemented Intervention Assistance Teams (IATs) to meet the needs of students having learning and behavior problems in the classroom.

Description of Team
Document describes seven models for elementary school IATs. Functions vary by team, include precursor to special education referral (preventive) and individual student assistance.

Type of Evaluation
Case study descriptions.

Evaluation Measures
Evaluation measures include numbers of referrals to special education and skills/knowledge gained by classroom teachers.

Results
Results indicated fewer referrals for multi-factored evaluations to determine special education eligibility. In addition, access to support staff increased. Following IAT referral, special education referrals were more appropriate; e.g., more students referred for special education were determined to be eligible. Teachers developed a better understanding of students, and they used wider variety of instructional strategies.

Recommendations/Observations
Principal's leadership is essential to successful implementation of Intervention Assistance Teams.. It is also important to actively involve parents in the development and implementation of interventions.

Study Source and Purpose
Pugach, M.C. & Johnson, L.J. (1989). Prereferral interventions: Progress, problems & challenges. *Exceptional Children, 56*, 217-226.

Purpose
To review of the literature on two prevalent models of prereferral teams.

Description of Team
Two types of prereferral strategies are described: informal, school-based problem-solving teams, and informal consultation strategies. Informal problem solving teams can provide immediate informal assistance to teachers to solve mild learning and behavior problems in the classroom. They can also serve as a screening mechanism for determining appropriate referrals for full evaluation/determination of special education eligibility. Team membership is based on diverse membership and includes multi-disciplinary representation. Teams may be made up entirely of specialists and an administrator, with the referring teacher coming to the team for assistance. One or more permanent master teacher members representing general education can also be Team members. Other informal consultation strategies are also discussed.

Type of Evaluation
Descriptions of two types of prereferral interventions are provided, including advantages/disadvantages.

Evaluation Measures
Evaluation measures were not included within this descriptive paper.

Results
Both models involve some role redefinition and are viewed as structures consistent with education reform efforts to reorganize schools. Both models reflect prereferral efforts which improve legislated special education practices and provide immediate assistance to classroom teachers.

Recommendations/Observations
These following assumptions must underlie prereferral activities:

- Prereferral intervention is a function of general Consultation is multi-directional.
- Teacher have expertise to solve many problems without specialists if given time and structure.
- All problems don't require same configuration of assistance.

Study Source and Purpose
Rosenfield, S. (1992). Developing school-based consultation teams: A design for organizational change. *School Psychology Quarterly*, 7(1), 27-43.

Purpose
To discuss the process of determining how school-based Instructional Innovation Teams (IC Team) are conceptualized and delivered relative to the literature on effective change and innovation implementation.

Description of Team
The development of the Instructional Consultation Team model is described consisting of three stages--initiation, implementation, and institutionalization--is provided to guide the use of this model. The IC Team is an interdisciplinary instructional school support team . No specific team composition is noted. The use of IC-Team is meant to result in a systemic referral process which involves a conceptual and behavioral shift from finding student deficits to a restructuring of the setting so student can progress, and a restructured school management system, based on a more collaborative, problem-solving culture, with the IC Team at its core. Staff development and training is incorporated into all three stages of the model.

Type of Evaluation
Evaluation is described as a developmental process related to the three stages of the change process and based on 17 critical dimensions of the model validated by a panel. A multi-method process was utilized involving interviews with participating team members and teachers who have referred students, reviews of records, forms and files, and analysis of tapes of the consultation process itself. During the 1989-90 academic year, the level of implementation was assessed three times with feedback provided to the school and facilitators to guide on-going training.

Evaluation Measures
Evaluation measures included satisfaction with training, attitude of participants regarding students with special needs, student achievement and/or behavior, teacher/student classroom interactions, and cost-benefit analyses.

Results
Post-implementation special education referral rates in districts ranged from 11.6-17.5% (average, 15.2%) in pilot schools within district referral rates ranged 0-1.7% (average, 1.02%). In one pilot school prior to Team implementation, 73% of special education referrals were placed in special education. In the fourth year of Team implementation, 6% of those referred to Instructional Consultation Teams were placed in special education. Some beginning evidence was reported that student achievement and behavior are positively affected by the school-based intervention team service delivery model.

Recommendations/Observations
The following recommendations/observations were made:

- Program development and research impacting the service delivery system changes require an extended period of time for planning and implementation..
- There is a need for a broad array of research strategies.
- Working relationships between researchers and school practitioners need to be supported.
- School psychologists must move from their traditional "testing" roles to participate in Team consultation.

Study Source
Ross, R.P. (1995). Best practices in implementing intervention assistance teams. In: *Best Practices in School Psychology*. Rockville, MD: National Association of School Psychologists.

Purpose
This paper provides a review of the literature intervention assistance programs.

Description of Team
The paper compares multi-disciplinary teams (including school psychologists). Teacher Assistance Teams are made up of regular classroom teachers. Specific team structures are not defined; however, the discussion reviews three models of intervention/consultation: the behavioral model of consultation with focus on interventions for individual or small group of students; the process model with focus on organizational analysis and interaction among people in work groups; and the mental health model with focus on what is blocking the teacher's problem-solving skills.

Type of Evaluation
Review of literature findings.

Evaluation Measures
A synthesis of the literature regarding potential obstacles to successful implementation of Intervention Assistance Teams, as well as necessary resources and best practices.

Results
Potential obstacles and disincentives to implementing team intervention assistance include: potential loss of jobs, changed job roles and responsibilities, increased responsibilities, scaled-down costs that may involve scaled-down expectations, resistance to change, loss of funding due to reduced enrollment in special ed. classes, cost of intervention assistance programs, commitment to the current special education system which is perceived to outweigh benefits of change, and more bureaucracy involved in the implementation of prereferral intervention teams.

Recommendations/Observations
Resources needed for implementation of intervention assistance programs include: planning, patience, persistence and perspective; time to consult, administrative support, staff development and training, faculty support, parent support, and funding patterns that support indirect preventative services. It is important to implement evaluation procedures to collect data regarding implementation, effectiveness, and program/student outcomes.

Study Source
Schrag, Judy A. (1995). *Study of prereferral intervention policies and procedures implemented within the Delaware school districts*. Washington, D.C.: Educational Services/Learning Systems Group.

Purpose of Study
To determine the extent to which prereferral intervention policies and procedures are being implemented within Delaware's nineteen school districts, as well as to assess and evaluate the impact of these prereferral interventions on students with academic, learning, and/or behavioral problems; parents; teachers; administrators; and other student support staff.

Description of Team
School-based support teams are being implemented throughout Delaware with different names and varying compositions. Usually, the teams are made up of classroom teachers, administrators, and other special education support personnel. School principals may also participate as a prereferral team member.

Type of Evaluation
Multi-method approach involving the collection of quantitative and qualitative information, including document reviews and analysis, questionnaire surveys, interviews, focus groups, and information conversations.

Evaluation Measures
Evaluation measures included special education referral rates; extent of policies and procedures in place and being implemented; resources (training, staff, time, and fiscal) available and needed to implement prereferral procedures; results of prereferral intervention; and perceptions of teachers, administrators, team members, and support personnel regarding prereferral interventions provided.

Results
- Fifteen out of nineteen school districts reported the use of some form of a school-based problem solving team.
- Fifteen out of nineteen school districts reported that documentation of prereferral interventions provided was required.
- Over three-fourths of the teachers, principals/assistant principals, and student support staff indicated that they had been involved in prereferral interventions.
- Generally, prereferral interventions are seen as a part of the special education process of sorting out students in need of special education and related services, as well as to provide opportunities for success and learning in the child's general education classroom.
- Additional staff, time to plan and for staff to work together, as well as staff development were ranked as the top three needed resources across all personnel responding to the questionnaire survey.
- Approximately 80% of students receiving prereferral intervention remained in general education, while approximately 16% were subsequently placed into special education.
- Male students and African American students had a significantly greater proportion in the population of students receiving prereferral intervention than in the total school population.
- Quantifiable data and information regarding prereferral intervention impact on students were generally unavailable. However, anecdotal information indicated teacher satisfaction with team and other prereferral assistance received.
- Of parents/family members responding to a questionnaire survey, about 23% did not feel that prereferral interventions had been helpful for their child.

Recommendation/Observations
- School district personnel indicated a need for dissemination of effective prereferral intervention strategies, as well as additional staff development.
- School district personnel also indicated the need for continued and broader parent/family involvement in prereferral intervention process and strategies.
- Other recommendations made by school district personnel included needed changes in the state funding formulas to encourage and promote collaboration across general and special education, increased local flexibility, less paperwork, reduction in class size, and increase priority for early intervention.
- Parent/family members made a number of recommendations including the need for increased communication, additional individual help for their child, and more patience and understanding regarding individual child needs.
- There is also a need for more systematic collection of data regarding the impact of prereferral intervention assistance received on student behavioral and academic performance.

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Study Source
Schram, L. & Semmel, M. I. (1984, September). *Problem solving teams in California: Appropriate responses by school site staff to students who are difficult to teach and manage.* California University, Santa Barbara, Graduate School of Education. (ERIC Document Reproduction Service No. ED 225 485).

Purpose of Study
To provide a final report of the evaluation of the impact of Problem Solving Teams implemented in California.

Description of Team
Problem Solving Teams are a school-based group that provides consultation and follow-up assistance to insure proper placement of students in school site programs and to help decrease the number of inappropriate referrals to special education.

Type of Evaluation
Telephone and mail surveys of all 58 counties was utilized. Intensive interviews with principals were also held at selected school sites.

Evaluation Measures
Survey data was gathered regarding teacher attitudes and success of Problem Solving Teams.

Results
Special Education referral rates were reduced in schools using Problem Solving Teams. Successful Team operation was distinguished from the multi-disciplinary assessment or IEP Team mandated functions. There was divergence of opinion over how "successful" some teams have been. Teacher survey responses and personal comments to interviewers did not always support administrators' and team members' perceptions of success. Successful Teams had the following in common: principal support, efficiency in conducting team business, practicality and usefulness of recommendations to teachers, and demonstrable concern that teachers be satisfied. Results also indicated that none of the school sites maintained objective, formative data regarding positive, educational outcomes for students. Rather, most schools depend on loose, informal networks to filter evaluative information back and form between team members and teachers. Principals indicated that the greatest benefit of Problem Solving Teams was that management of decision-making about students became more efficient and easier to implement. Lack of resources tends to severely limit the range of possible team functions envisioned by principals.

Recommendation/Observations:
Key qualities of successful teams include:

- Efficiency in conducting team business.
- General practicality and usefulness of recommendations to teachers.
- Demonstrable concern that teachers be satisfied with Team efforts.
- Procedures to maintain objective formative data to show if PST-recommended interventions resulted in positive education outcomes for students.

Study Source
Sindelar, P.T., Griffin, C.C., Smith, S.W., & Watanabe, A.K. (1992). Prereferral intervention: Encouraging notes on preliminary findings. *Elementary School Journal, 92*(3), 245-259.

Purpose
To review studies regarding prereferral intervention models and their effects on such variables such as referral rates, student achievement and behavior, and consumer satisfaction.

Description of Team
A variety of teams were reviewed and classified into two main types: Teacher Assistance Teams (TATs), emphasizing teacher initiative, accountability, communication and effective decision making; as well as more formal consultative, often multi-disciplinary, models (ex. MATs). Both models serve to prevent special education referral and assist teachers to meet needs of difficult-to-teach students. The more collaborative TAT-type model focuses on assisting the teacher to problem solve; the consultative models may focus on teacher management skills and/or individual student concerns.

Type of Evaluation
Review of literature findings.

Evaluation Measures
Evaluation measures reviewed were referral rates, level of student achievement and behavior, and consumer satisfaction.

Results
- Generally the literature supports that special education referrals are reduced when either Team model is implemented and those students referred to special education are more appropriate referrals.
- Student achievement increases as a result of prereferral team intervention.
- Generally, teachers and students pleased with Team-initiated interventions.
- Studies regarding the effect of Teams on improvement of educational practice are lacking.

Recommendations/Observations
The following recommendations/observations were made:

- Administrative support is critical.
- Teachers will need to accept new roles & adopt new attitudes.
- Realistic intervention plans and follow-through of those plans is essential.
- There is a need for more research, including a careful analysis of Team variables.

Study Source
Singer, A. (1993, July 7). *Increasing the capacity of regular education to services students with learning problems through collaboration with the child study team.* Ed.D. Practicum, Nova University. (ERIC Document Reproduction Service No. ED 365 077).

Purpose
To discuss the implementation and evaluation of a prereferral intervention approach to increase support for elementary and middle school students with learning problems through the use of Pupil Assistance Committees.

Description of Team
Pupil Assistance Committee (elementary school) usually included the principal, learning consultant, reading specialist, an experienced general education teacher, and the referring teacher.

Type of Evaluation
Limited data collection

Evaluation Measures
Data was gathered to compare initial year impact on referrals, general education teacher contact with Child Study Team members, and outcomes of CST (special education) referrals to prior year (no PAC).

Results
The number of referrals to CST dropped from 64 to 41. Prior to PAC, 48 of 64 CST referrals were classified as eligible for special education. During the first year of PAC implementation, 39 of 48 referrals were classified as eligible for special education. General education teacher contact with a member of the CST prior to special education referral increased significantly. Prior to PAC, no such contact was made prior to full referral to CST. The number of interventions attempted prior to special education referral increased in the first year of PAC. Some parent concerns were noted regarding the PAC delaying needed special education services for their child.

Recommendations/Observations
Parents should be involved in the development of a school PAC (e.g., provide for parent notification and involvement in PAC referrals). Time should be allowed for PAC members to establish a collaborative relationship. Routines and schedules should be set. A PAC established at middle school and secondary levels requires additional considerations regarding school climate and scheduling.

Study Source
Yau, M. (December, 1988). *Alternative delivery models for learning disabled students*. Ontario: Toronto Board of Education.

Purpose
To report on a review synthesis is provided regarding four alternative problem solving team models for delivering special assistance to students with learning disabilities, including model characteristics, historical background, philosophy underlying the model, types of services, conditions for the success of the model, evaluation studies on the model, and limitations of the model.

Description of Team
The article reviews various Problem Solving Team models including Teacher Assistance Teams, Local School Teams, Student Study Teams, Consultation Committees, School-based Prescription Teams, School Teams, and Student Needs Committees. Differences and similarities of these intervention teams are provided in this article; e.g., they are school based; they are organized explicitly to assist regular classroom teachers; they all involve peer support and a cooperative problem approach; and they insure proper placement of students in school programs by providing intervention at the classroom level.

Type of Evaluation
Review of literature findings.

Evaluation Measures
Evaluation measures reviewed included rate of special education referrals, administrator and teacher attitudes toward the team, enhanced teacher attitudes, and increased teacher skills.

Results
- o PSTs can reduce referrals to special education.
- o PSTs have the effect of screening out inappropriate special education. referrals.
- o PSTs can be cost-effective.
- o PSTs can provide immediate and relevant peer support to content area teachers.
- o PSTs create a more positive climate among teacher and administrators working with students with disabilities.
- o PST's major role is to delineate and clarify problems, develop a plan of intervention and monitor effectiveness of intervention.

Recommendations/Observations
PSTs need clearly defined goals; e.g., they are not a precursor to determining special education eligibility and they do not serve as special education placement committees. There must be structure and time limits for team meetings. It is important to maintain clear, consistent meeting formats focusing on developing consensus plans of action. The referring teacher must be active team participants. Principal/ administrative support is critical. Parents should be involved in PST. Team membership should not exceed five persons. Training is critical.